

## **CHAPTER 4**

### **POINT AND NONPOINT SOURCE CHARACTERIZATION OF THE OLD HICKORY LAKE WATERSHED**

#### **4.1 Background.**

#### **4.2. Characterization of HUC-10 Subwatersheds**

**4.2.A. 0513020101 (Cumberland River)**

**4.2.B. 0513020102 (Round Lick Creek)**

**4.2.C. 0513020103 (Goose Creek)**

**4.2.D. 0513020104 (Cumberland River)**

**4.2.E. 0513020105 (Bledsoe Creek)**

**4.1. BACKGROUND.** This chapter is organized by HUC-12 subwatershed, and the description of each subwatershed is divided into four parts:

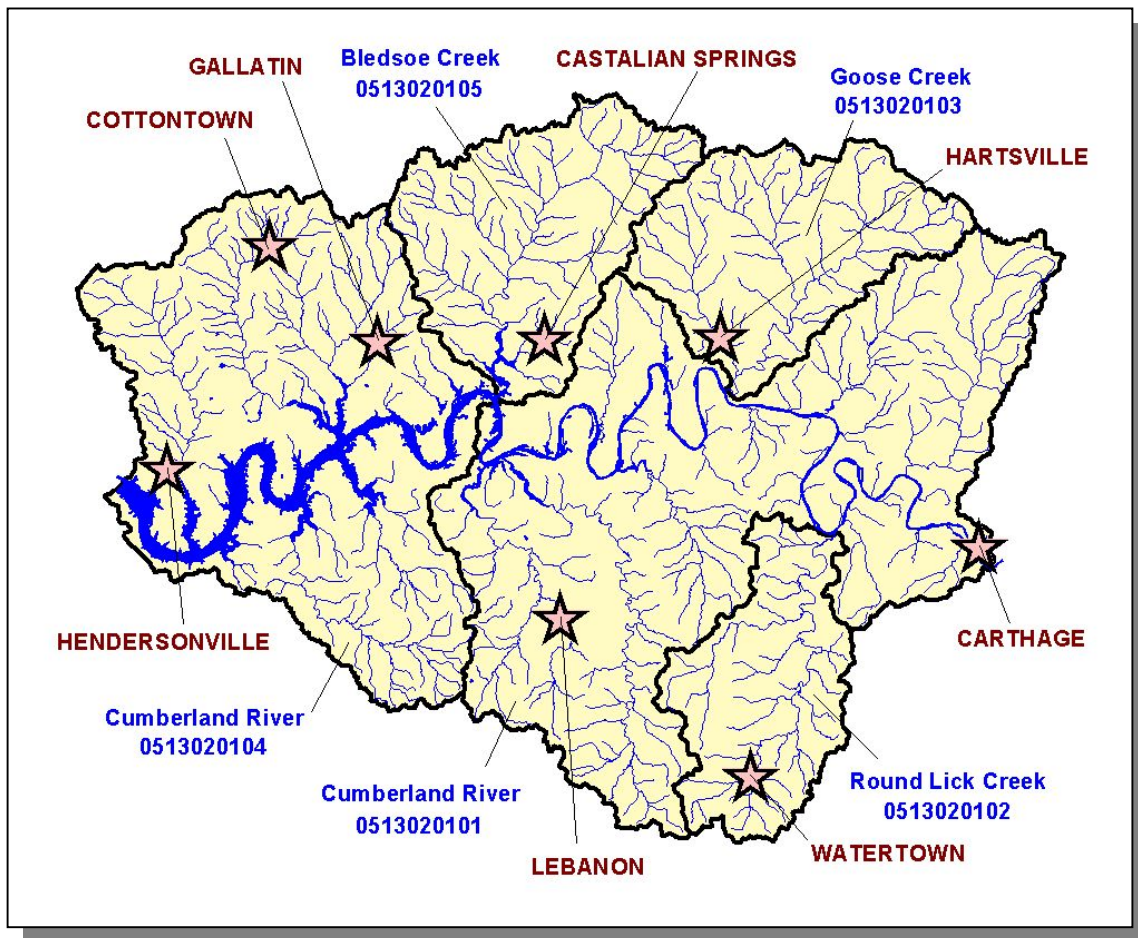
- i. General description of the subwatershed
- ii. Description of point source contributions
  - ii.a. Description of facilities discharging to water bodies listed on the 2004 303(d) list
- iii. Description of nonpoint source contributions

The Old Hickory Lake Watershed (HUC 05130201) has been delineated into five HUC 10 (10-digit) subwatersheds, each of which is composed of one or more HUC-12 subwatersheds.

Information for this chapter was obtained from databases maintained by the Division of Water Pollution Control or provided in the WCS (Watershed Characterization System) data set. The WCS used was version 2.0 (developed by Tetra Tech, Inc for EPA Region 4) released in 2003.

WCS integrates with ArcView® v3.x and Spatial Analyst® v1.1 to analyze user-delineated (sub)watersheds based on hydrologically connected water bodies. Reports are generated by integrating WCS with Microsoft® Word. Land Use/Land Cover information from 1992 MRLC (Multi-Resolution Land Cover) data are calculated based on the proportion of county-based land use/land cover in user-delineated (sub)watersheds. Nonpoint source data in WCS are based on agricultural census data collected 1992–1998; nonpoint source data were reviewed by Tennessee NRCS staff.

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**Figure 4-1. The Old Hickory Lake Watershed is Composed of Five USGS-Delineated Subwatersheds (10-Digit Subwatersheds).** Locations of Carthage, Castalian Springs, Cottontown, Gallatin, Hartsville, Hendersonville, Lebanon, and Watertown, are shown for reference.

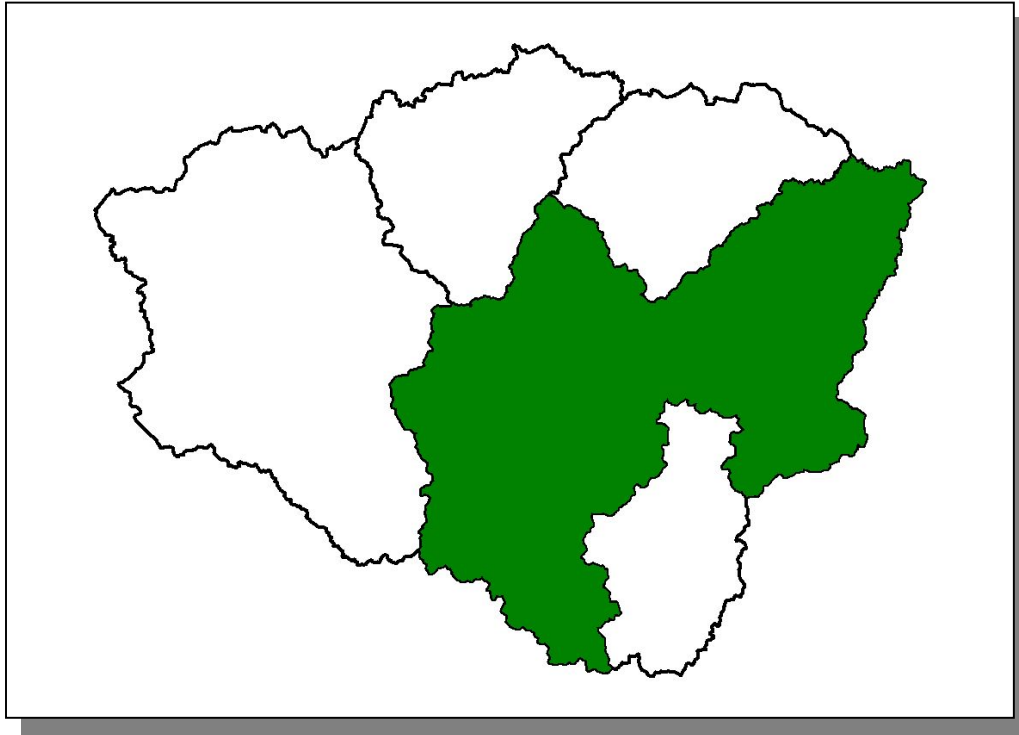
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**4.2. CHARACTERIZATION OF HUC-10 SUBWATERSHEDS.** The Watershed Characterization System (WCS) software and data sets provided by EPA Region IV were used to characterize each subwatershed in the Old Hickory Lake Watershed.

HUC-10	HUC-12
0513020101	051302010101 (Cumberland River)
	051302010102 (Peyton Creek)
	051302010103 (Cumberland River)
	051302010104 (Cumberland River)
	051302010105 (Cedar Creek)
	051302010106 (Spring Creek)
	051302010107 (Bartons Creek)
0513020102	051302010201 (Round Lick Creek)
	051302010202 (Jennings Fork)
0513020103	051302010301 (Upper Goose Creek)
	051302010302 (Lower Goose Creek)
0513020104	051302010401 (Cumberland River)
	051302010402 (Spencer Creek)
	051302010403 (East Camp Creek)
	051302010404 (Station Camp Creek)
	051302010405 (Cumberland River)
	051302010406 (Cedar Creek)
	051302010407 (Drakes Creek)
0513020105	051302010501 (Upper Bledsoe Creek)
	051302010502 (Lower Bledsoe Creek)

**Table 4-1. HUC-12 Drainage Areas are Nested Within HUC-10 Drainages.** NRCS worked with USGS to delineate the HUC-10 and HUC-12 drainage boundaries.

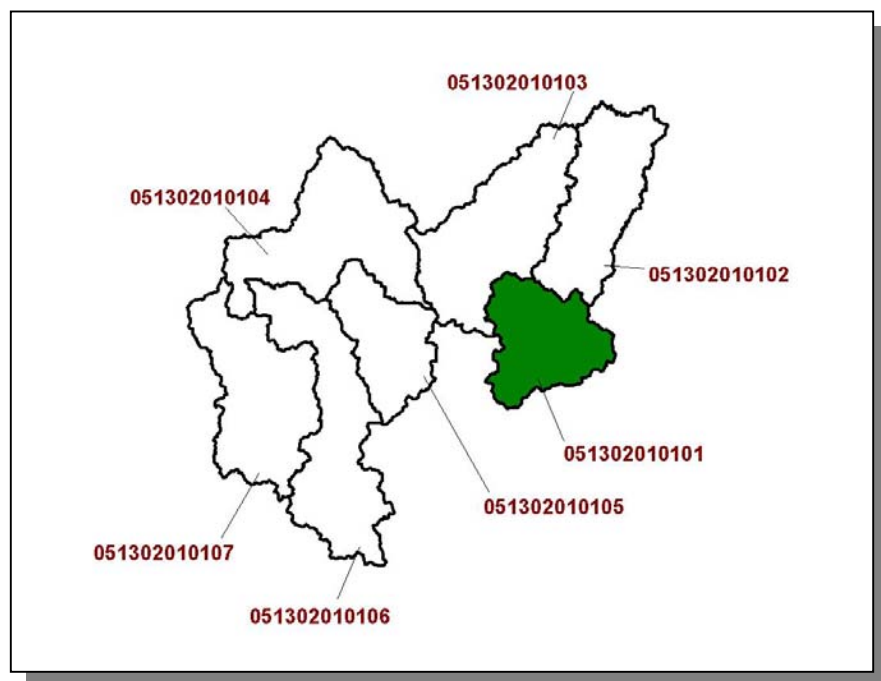
**4.2.A. 0513020101.**



**Figure 4-2. Location of Subwatershed 0513020101.** All Old Hickory Lake HUC-10 subwatershed boundaries are shown for reference.

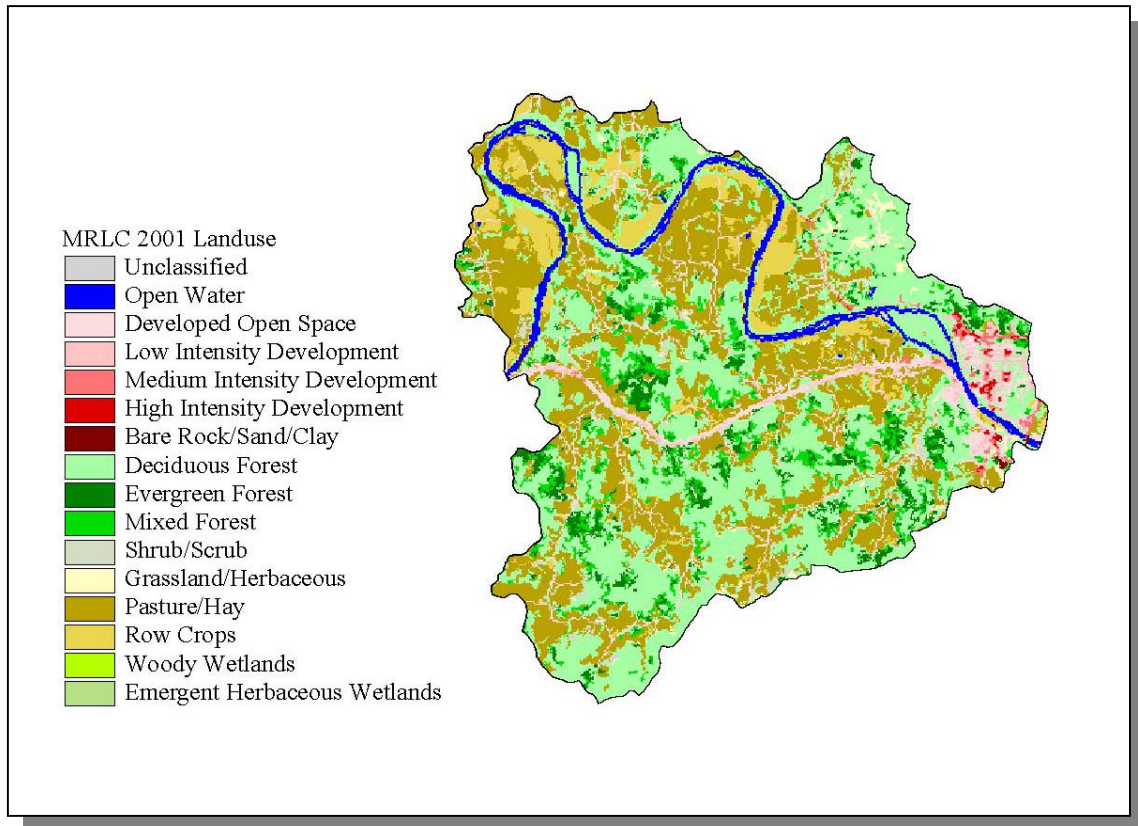


**4.2.A.i. 051302010101 (Cumberland River).**



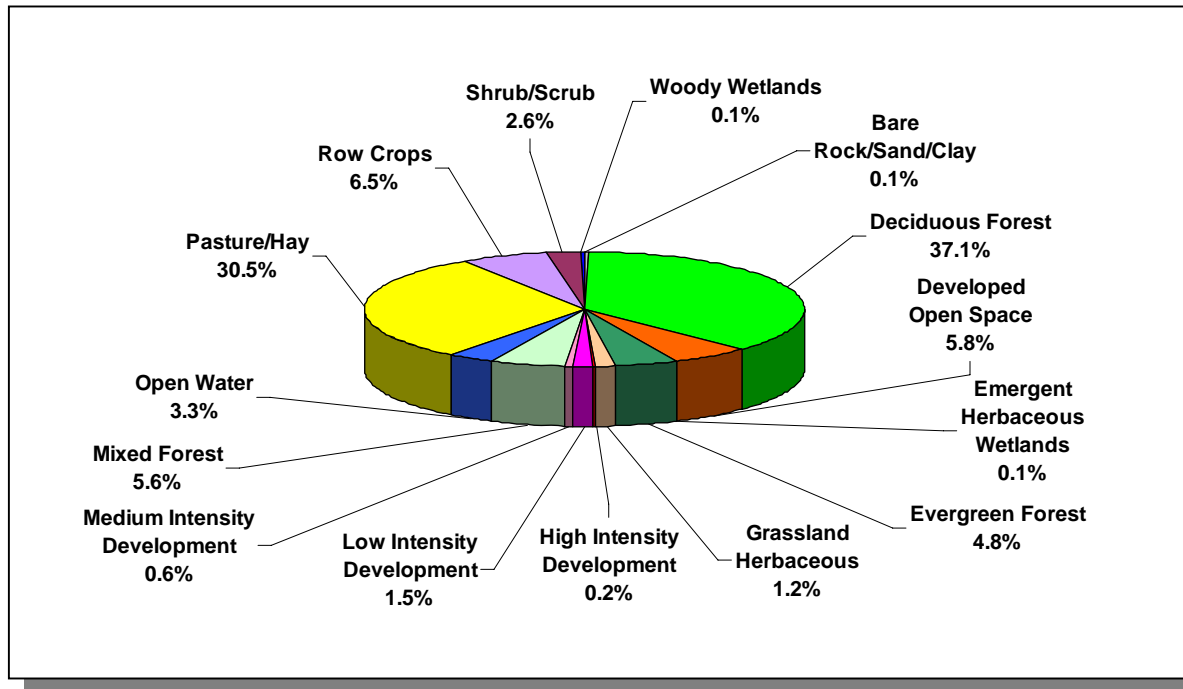
**Figure 4-3. Location of Subwatershed 051302010101.** All HUC-12 subwatershed boundaries are shown for reference.

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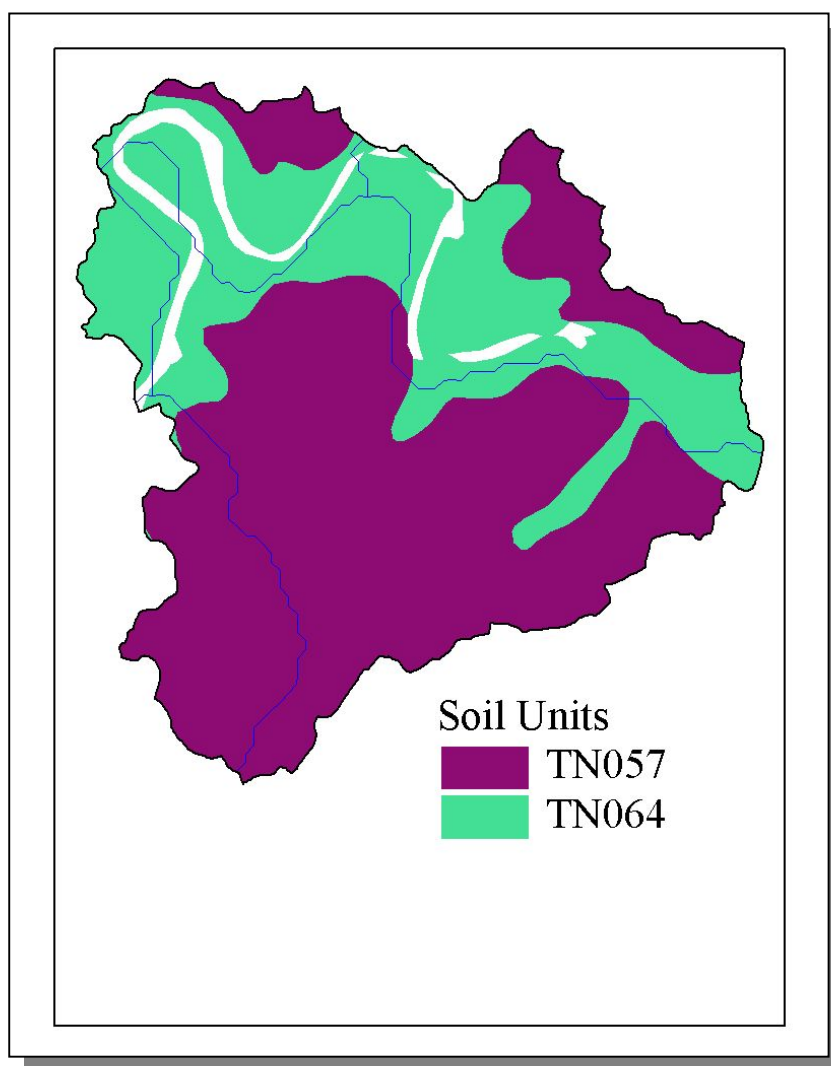


**Figure 4-4. Illustration of Land Use Distribution in Subwatershed 051302010101.**

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**Figure 4-5. Land Use Distribution in Subwatershed 051302010101.** More information is provided in Appendix IV.



**Figure 4-6. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010101.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN064	7.00	C	1.19	5.82	Silty Loam	0.37

**Table 4-2. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010101.** The definition of "Hydrologic Group" is provided in Appendix IV.

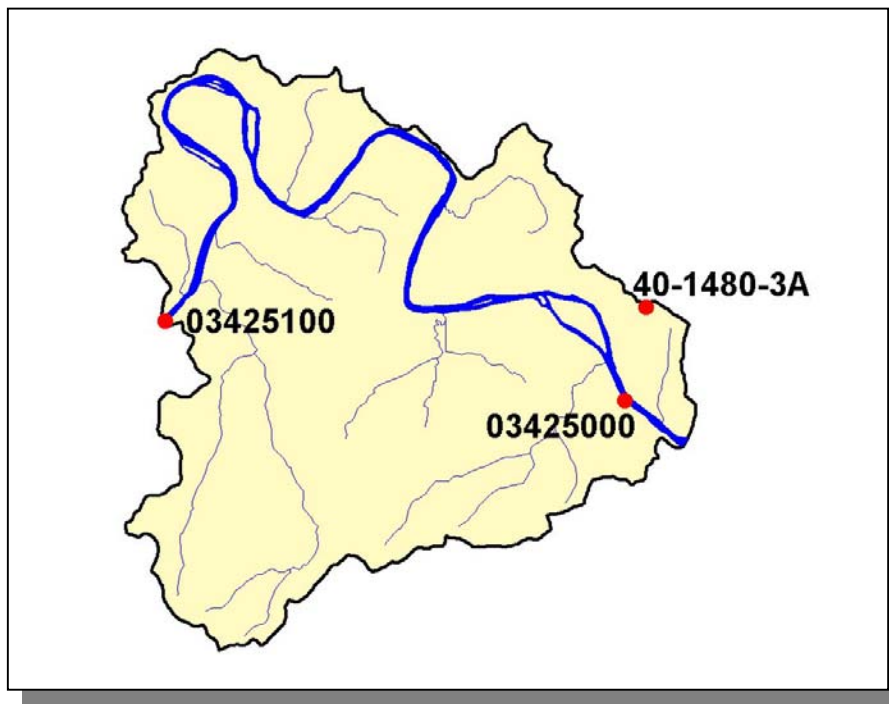
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Smith	14,143	16,047	17,712	13.13	1,857	2,107	2,325	25.2

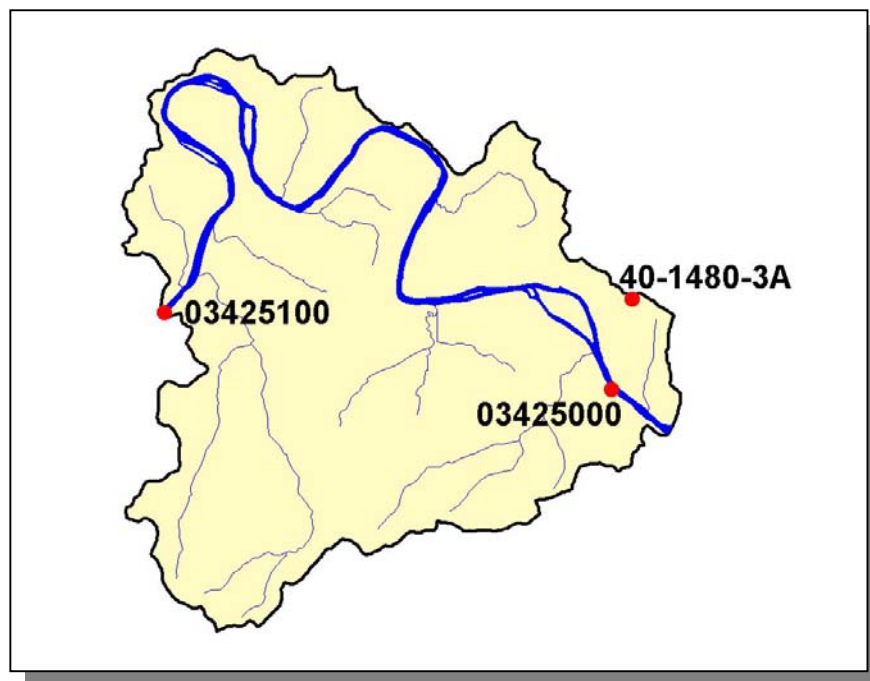
**Table 4-3. Population Estimates in Subwatershed 051302010101.**

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Carthage	Smith	2,368	1,080	1,054	23	3
South Carthage	Smith	851	376	295	81	0
<b>Total</b>		<b>3,219</b>	<b>1,456</b>	<b>1,349</b>	<b>104</b>	<b>3</b>

**Table 4-4. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051302010101.**

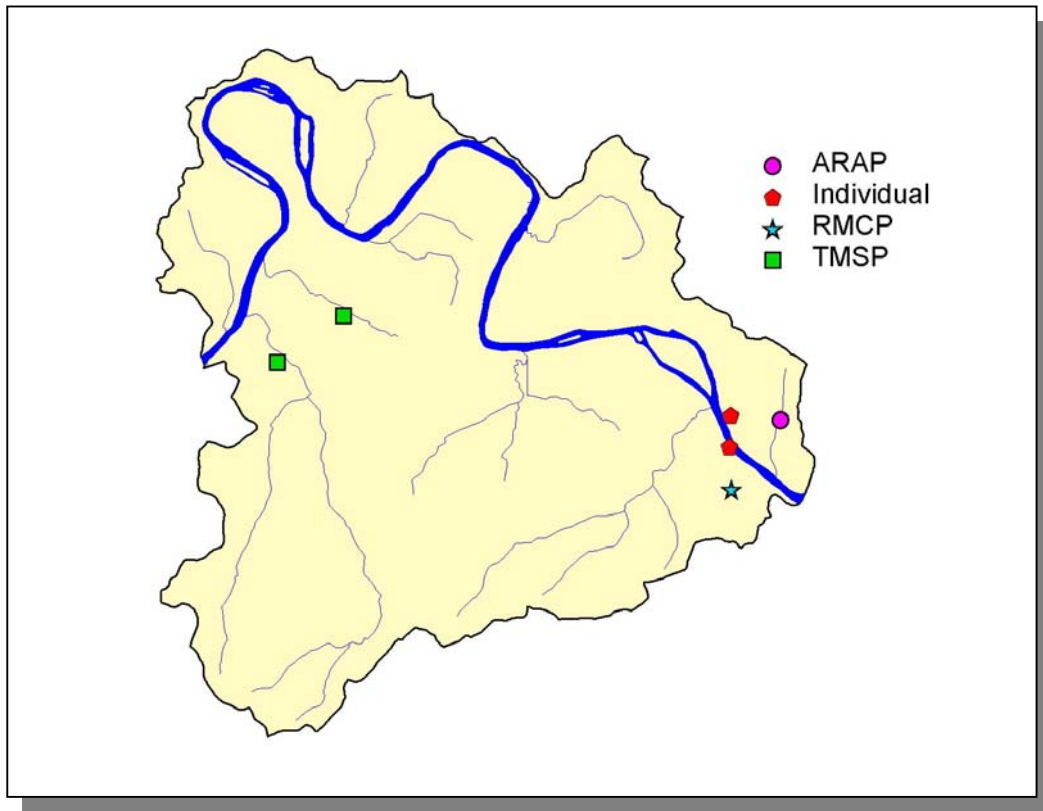


**Figure 4-7. Location of Historical Streamflow Data Collection Sites in Subwatershed 051302010101.** More information is provided in Appendix IV.



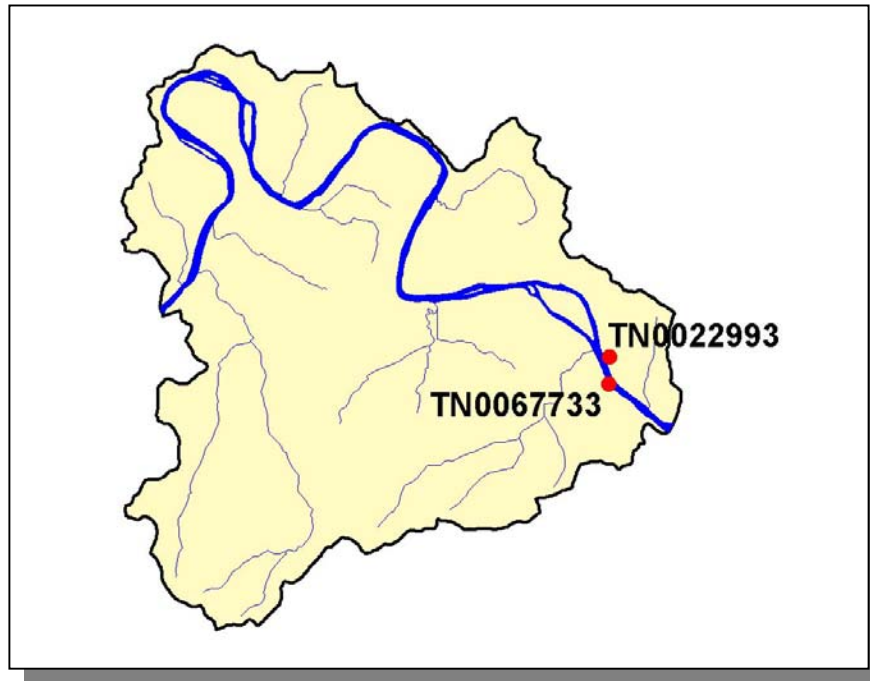
**Figure 4-8. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010101.** More information, including site names and locations, is provided in Appendix IV.

**4.2.A.i.a. Point Source Contributions.**

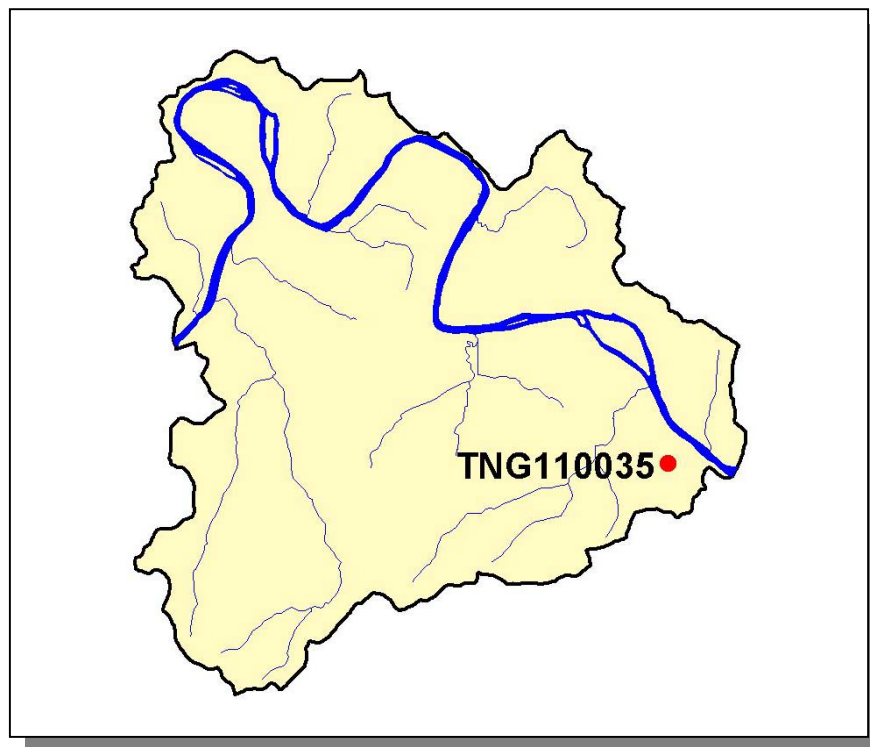


**Figure 4-9. Location of Permits Issued in Subwatershed 051302010101.** More information, including the names of facilities, is provided in Appendix IV.

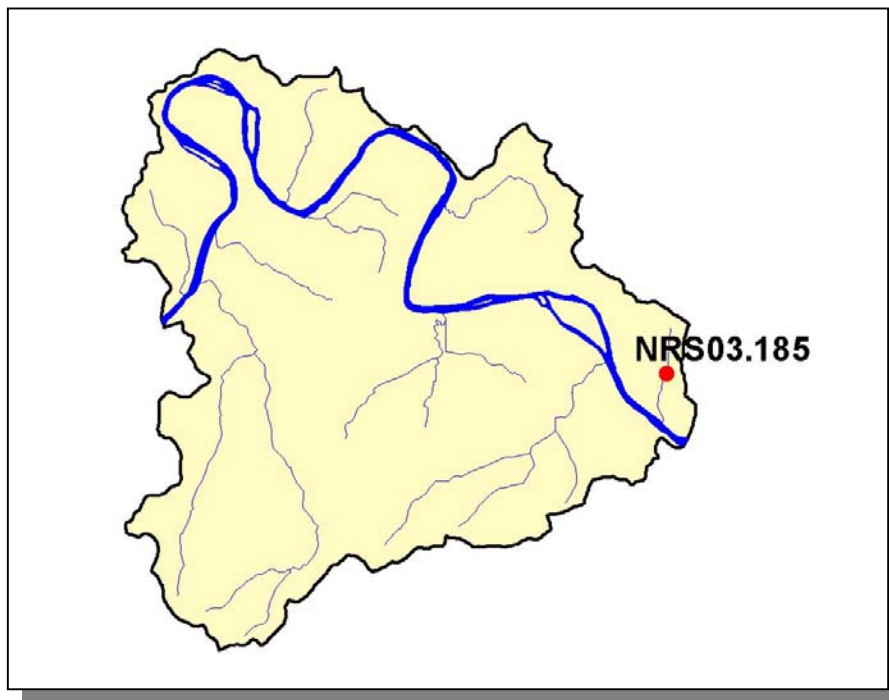




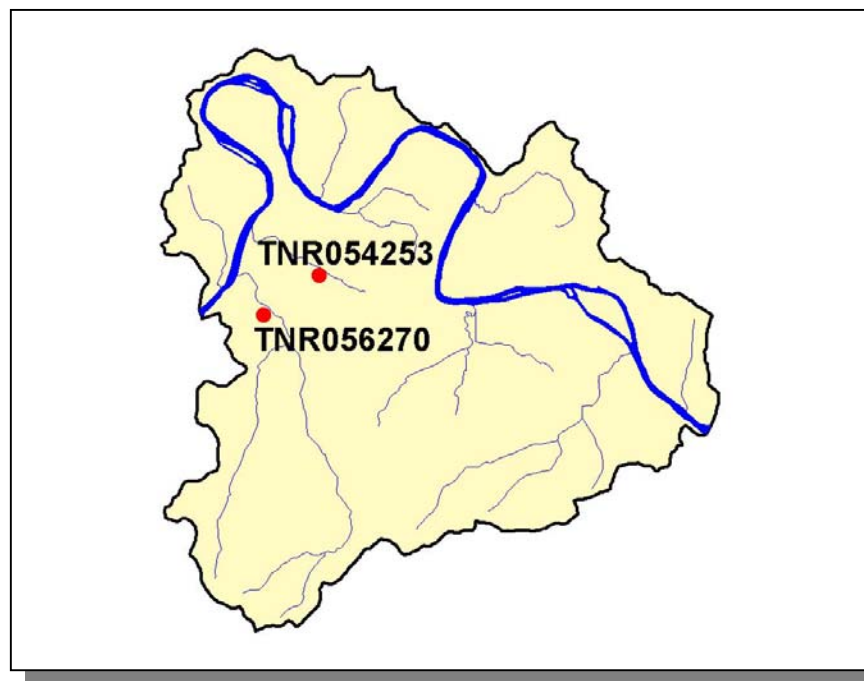
**Figure 4-10. Location of Active NPDES Sites in Subwatershed 0513020101.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-11. Location of Ready Mix Concrete Plants (RMCP) in Subwatershed 0513020101.** More information is provided in Appendix IV.



**Figure 4-12. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 051302010101.** More information is provided in Appendix IV.



**Figure 4-13. Location of TMSP Sites in Subwatershed 051302010101.** More information, including the names of facilities, is provided in Appendix IV.

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**4.2.A.i.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
2,433	4,201	115	5	267	47

**Table 4-5. Summary of Livestock Count Estimates in Subwatershed 051302010101.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Smith	17,187	29,672	814	683	1,883	332

**Table 4-6. Summary of Livestock Count Estimates in Smith County.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

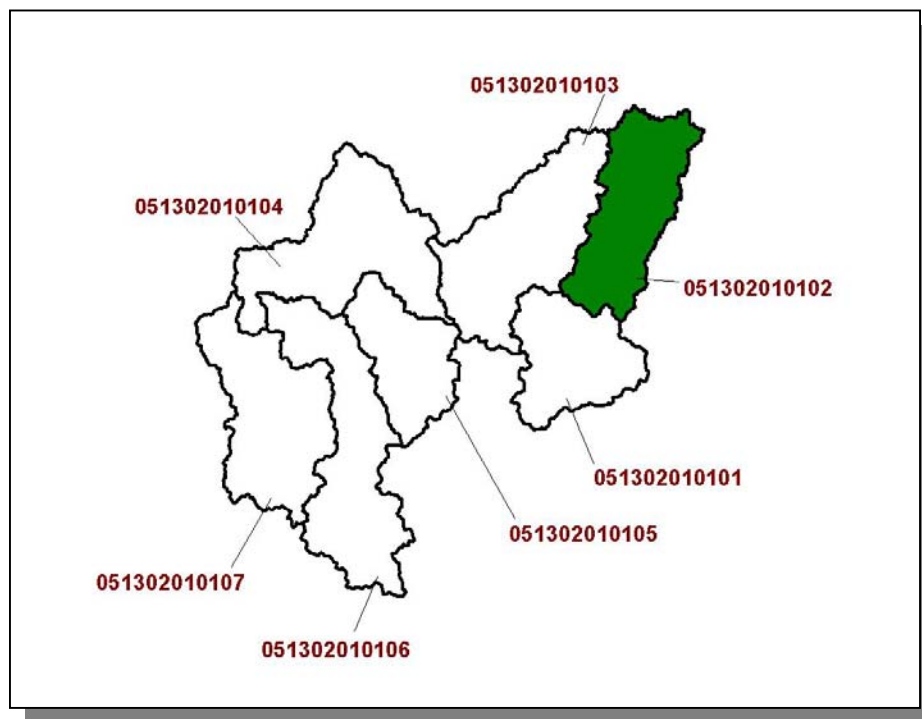
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Smith	81.0	81.0	1.1	2.6

**Table 4-7. Forest Acreage and Annual Removal Rates (1987-1994) in Smith County.**

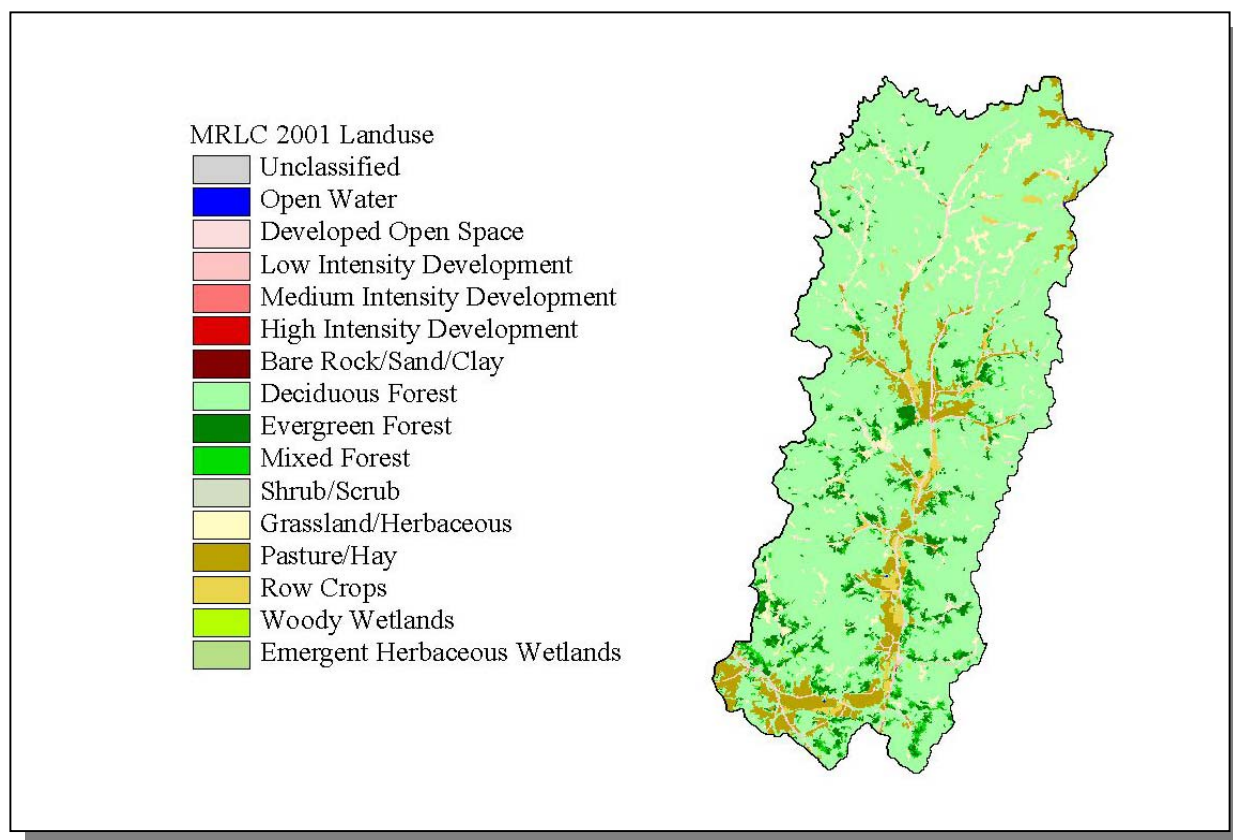
CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	1.47
Grass (Hayland)	0.12
Legumes, Grass (Hayland)	0.11
Grass, Forbs, Legumes (Mixed Pasture)	0.66
Soybeans (Row Crops)	6.36
Tobacco (Row Crops)	6.96
Farmsteads and Ranch Headquarters	0.45

**Table 4-8. Annual Estimated Total Soil Loss in Subwatershed 051302010101.**

**4.2.A.ii. 051302010102 (Peyton Creek).**

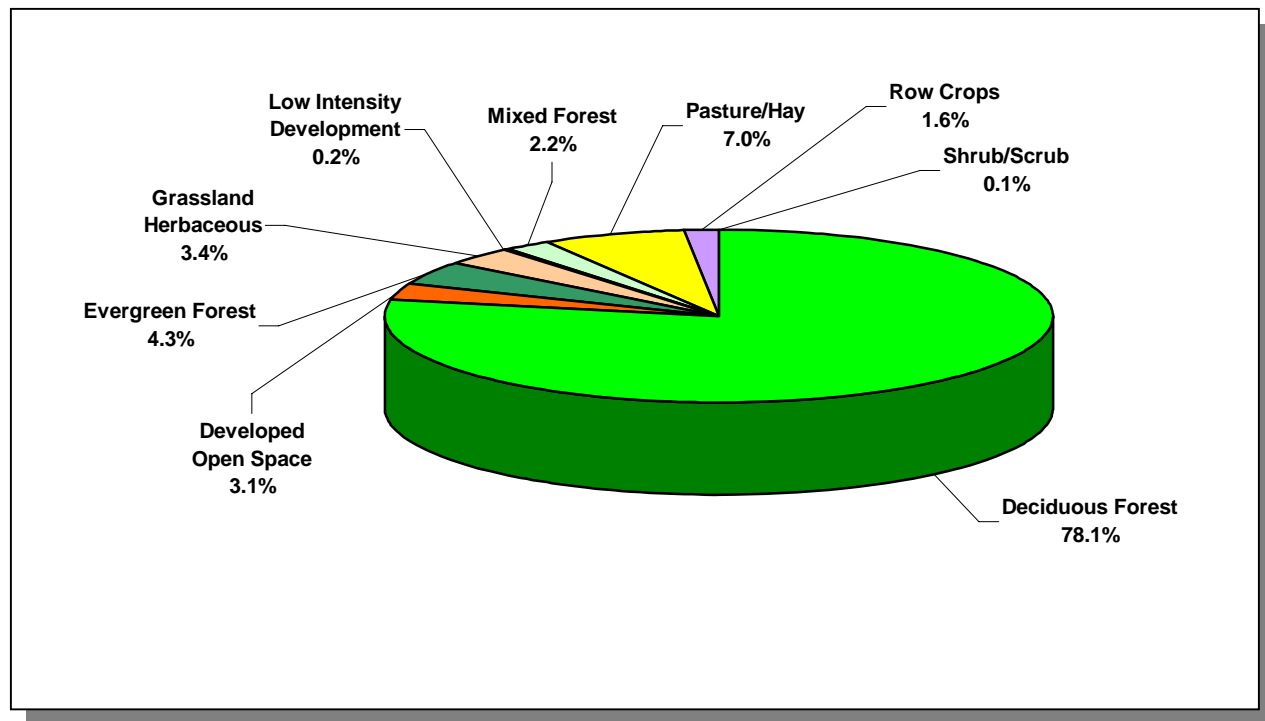


**Figure 4-14. Location of Subwatershed 051302010102.** All HUC-12 subwatershed boundaries are shown for reference.



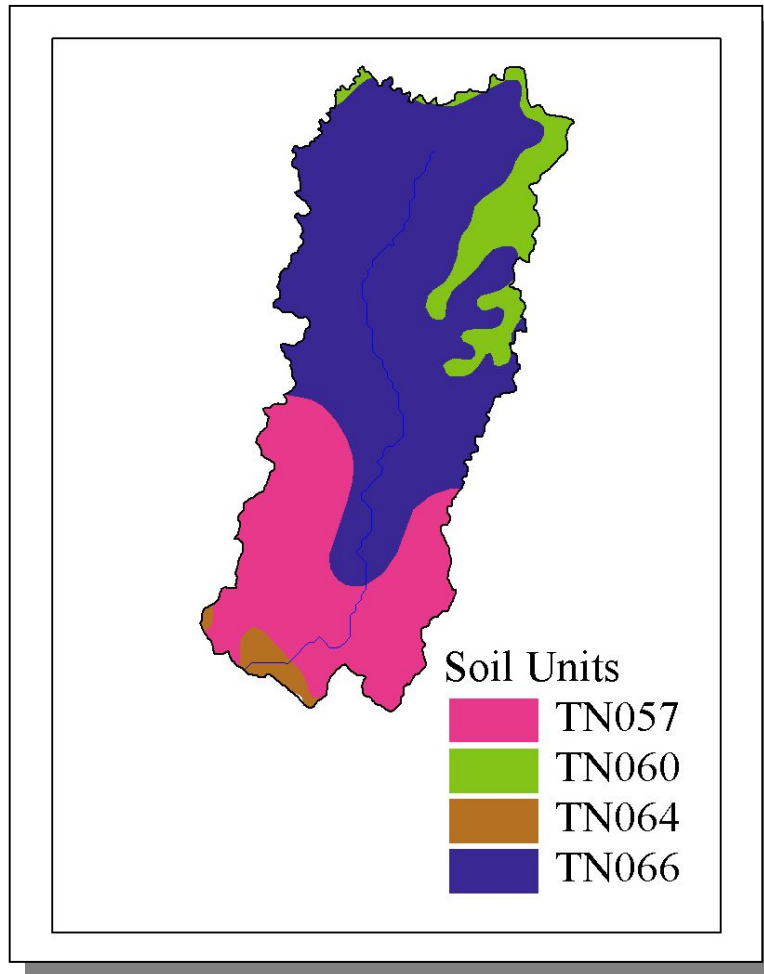
**Figure 4-15. Illustration of Land Use Distribution in Subwatershed 051302010102.**

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**Figure 4-16. Land Use Distribution in Subwatershed 051302010102.** More information is provided in Appendix IV.

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**Figure 4-17. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010102.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN060	5.00	B	1.30	5.32	Silty Loam	0.39
TN064	7.00	C	1.19	5.82	Silty Loam	0.37
TN066	0.00	B	2.62	4.75	Loam	0.28

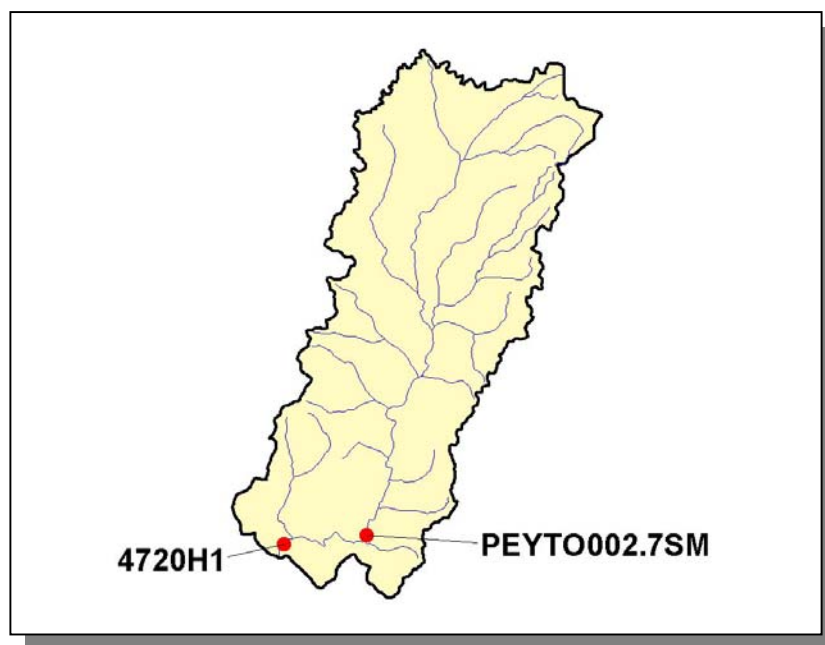
**Table 4-9. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010102.** The definition of "Hydrologic Group" is provided in Appendix IV.



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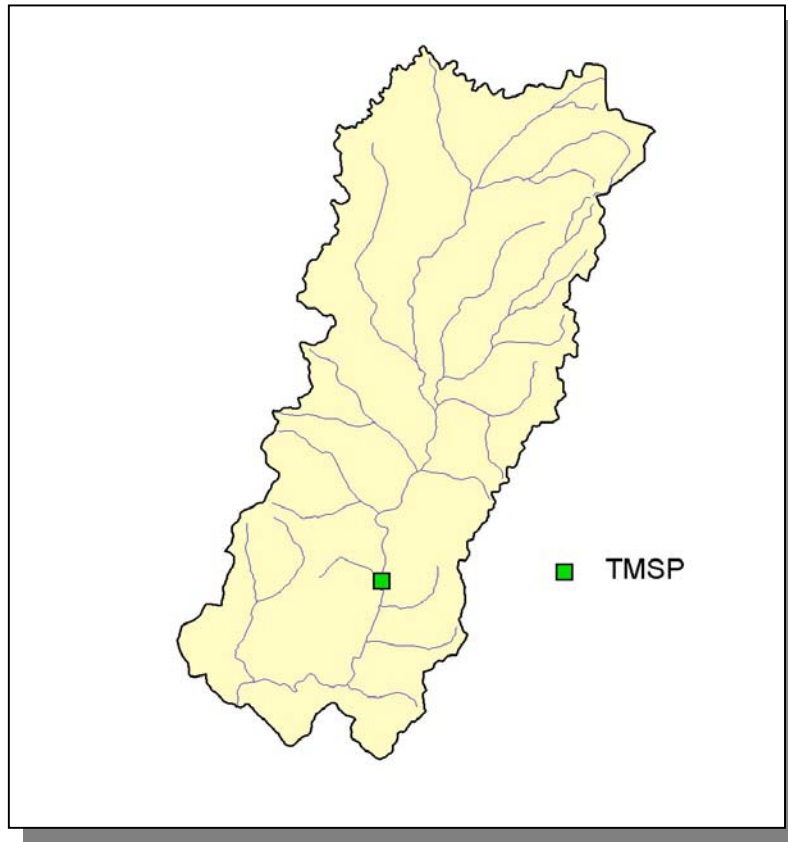
County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Macon	15,906	17,854	20,386	3.83	609	684	781	28.2
Smith	14,143	16,047	17,712	11.77	1,664	1,888	2,084	25.2
Trousdale	5,920	6,748	7,259	1.09	65	74	79	21.5
<b>Total</b>	<b>35,969</b>	<b>40,649</b>	<b>45,357</b>		<b>2,338</b>	<b>2,646</b>	<b>2,944</b>	<b>25.9</b>

*Table 4-10. Population Estimates in Subwatershed 051302010102.*



*Figure 4-18. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010102. More information, including site names and locations, is provided in Appendix IV.*

**4.2.A.ii.a. Point Source Contributions.**



**Figure 4-19. Location of Permits Issued in Subwatershed 051302010102.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-20. Location of TMSF Sites in Subwatershed 051302010102.** More information, including the names of facilities, is provided in Appendix IV.

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**4.2.A.ii.b. Nonpoint Source Contributions.**

<b>LIVESTOCK COUNTS</b>					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
1,660	2,868	72	<5	194	29

**Table 4-11. Summary of Livestock Count Estimates in Subwatershed 051302010102.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

<b>LIVESTOCK COUNTS</b>						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Macon	15,039	26,098	318	65	2,377	111
Smith	17,187	29,672	814	683	1,883	332
Trousdale	6,672	11,344	135	243	112	195

**Table 4-12. Summary of Livestock Count Estimates in Macon, Smith, and Trousdale Counties.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

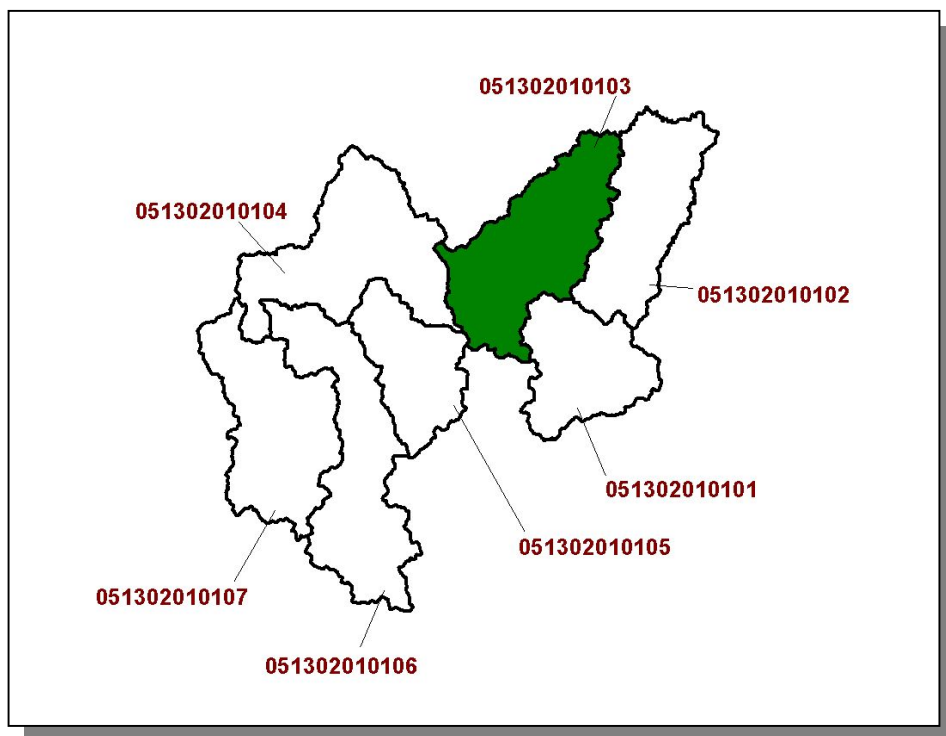
County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Macon				
Smith	81.0	81.0	1.1	2.6
Trousdale	30.0	30.0	0.1	0.4

**Table 4-13. Forest Acreage and Annual Removal Rates (1987-1994) in Macon, Smith, and Trousdale Counties.**

<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Legumes (Pastureland)	0.10
Grass (Pastureland)	1.19
Grass (Hayland)	0.14
Legumes, Grass (Hayland)	0.12
Legumes (Hayland)	0.13
Grass, Forbs, Legumes (Mixed Pasture)	0.74
Corn (Row Crops)	3.99
Soybeans (Row Crops)	6.36
Tobacco (Row Crops)	7.95
Wheat (Close-Grown Cropland)	3.43
Other Vegetable and Truck Crops	5.48
Conservation Reserve Program Lands	0.28
Farmsteads and Ranch Headquarters	0.37

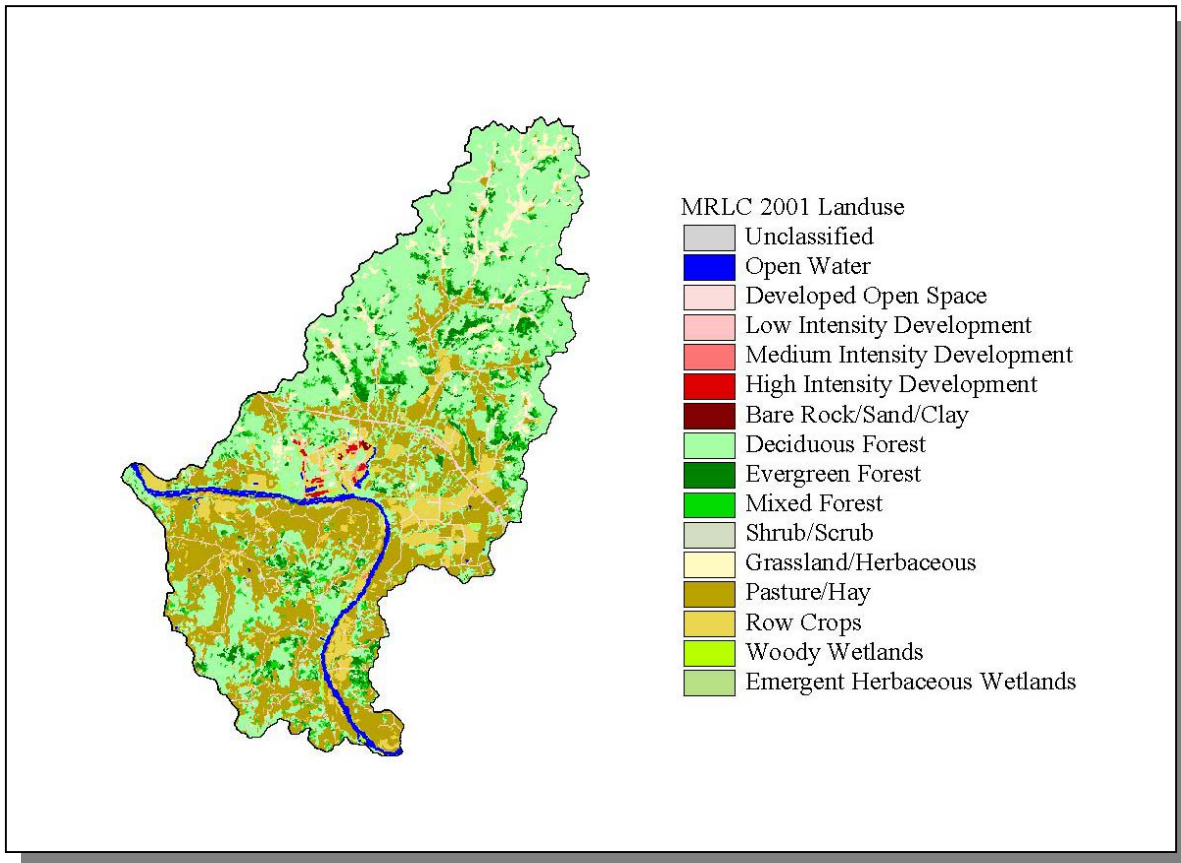
**Table 4-14. Annual Estimated Total Soil Loss in Subwatershed 051302010102.**

**4.2.A.iii. 051302010103 (Cumberland River).**



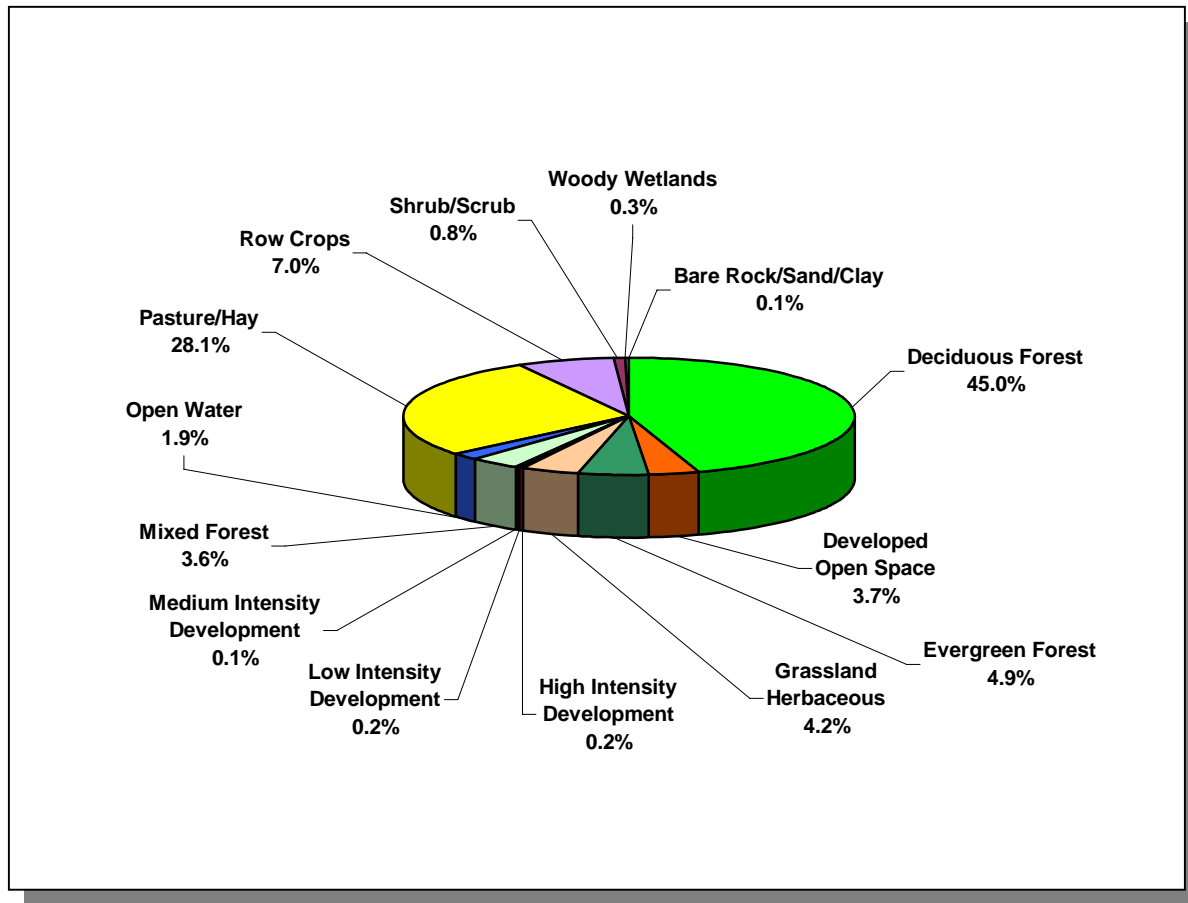
**Figure 4-21. Location of Subwatershed 0513020103.** All HUC-12 subwatershed boundaries are shown for reference.

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**Figure 4-22. Illustration of Land Use Distribution in Subwatershed 051302010103.**

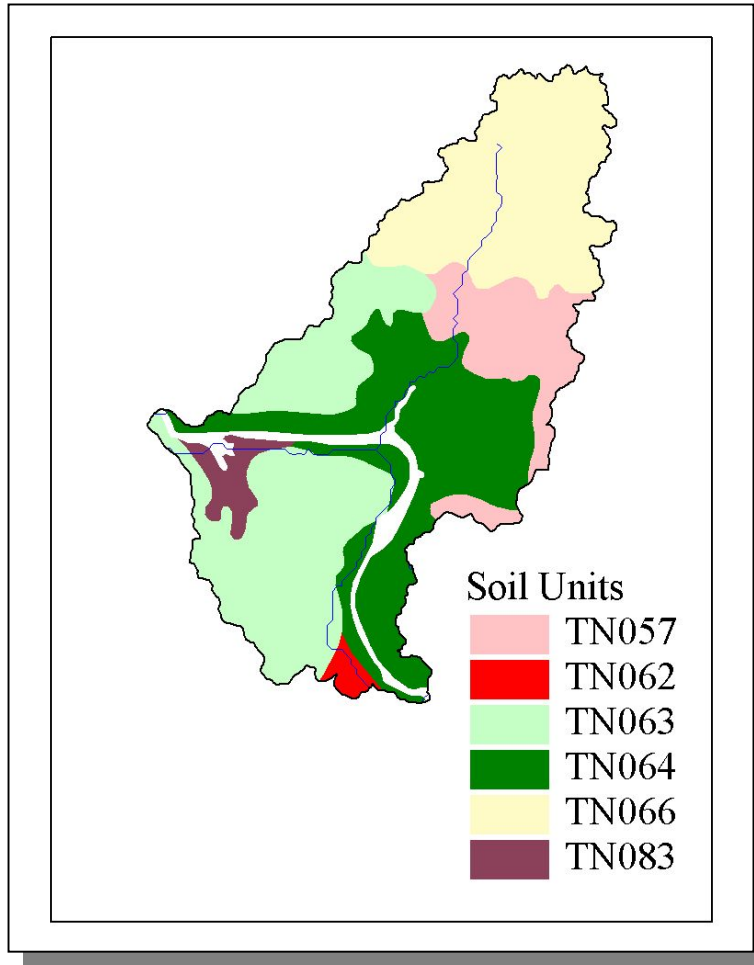
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**Figure 4-23. Land Use Distribution in Subwatershed 051302010103.** More information is provided in Appendix IV.



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**Figure 4-24. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010103.**

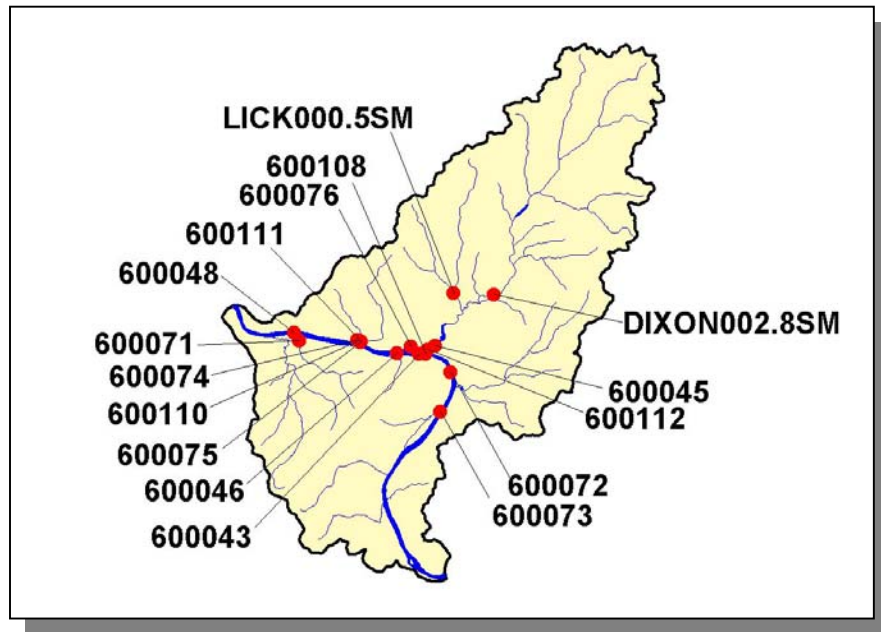
STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN062	0.00	C	0.98	4.40	Clayey Loam	0.26
TN063	0.00	C	1.19	5.72	Clayey Loam	0.32
TN064	7.00	C	1.19	5.82	Silty Loam	0.37
TN066	0.00	B	2.62	4.75	Loam	0.28
TN083	9.00	C	1.32	5.97	Silty Loam	0.36

**Table 4-15. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010103.** The definition of "Hydrologic Group" is provided in Appendix IV.

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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Macon	15,906	17,854	20,386	1.04	166	186	213	28.3
Smith	14,143	16,047	17,712	9.1	1,287	1,460	1,612	25.3
Trousdale	5,920	6,748	7,259	26.95	1,595	1,818	1,956	22.6
<b>Total</b>	<b>35,969</b>	<b>40,649</b>	<b>45,357</b>		<b>3,048</b>	<b>3,464</b>	<b>3,781</b>	<b>24.0</b>

*Table 4-16. Population Estimates in Subwatershed 051302010103.*



*Figure 4-25. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010103. More information, including site names and locations, is provided in Appendix IV.*

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**4.2.A.iii.a. Point Source Contributions.**

There are no point source contributions in this subwatershed.

**4.2.A.iii.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
4,134	7,106	155	8	334	91

**Table 4-17. Summary of Livestock Count Estimates in Subwatershed 051302010103.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Macon	15,039	26,098	318	65	2,377	111
Smith	17,187	29,672	814	683	1,883	332
Trousdale	6,672	11,344	135	243	112	195
Wilson	27,209	51,090	1,505	1,585	1,700	465

**Table 4-18. Summary of Livestock Count Estimates in Macon, Smith Trousdale and Wilson Counties.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Macon				
Smith	81.0	81.0	1.1	2.6
Trousdale	30.0	30.0	0.1	0.4
Wilson	98.1	97.0	1.7	6.8

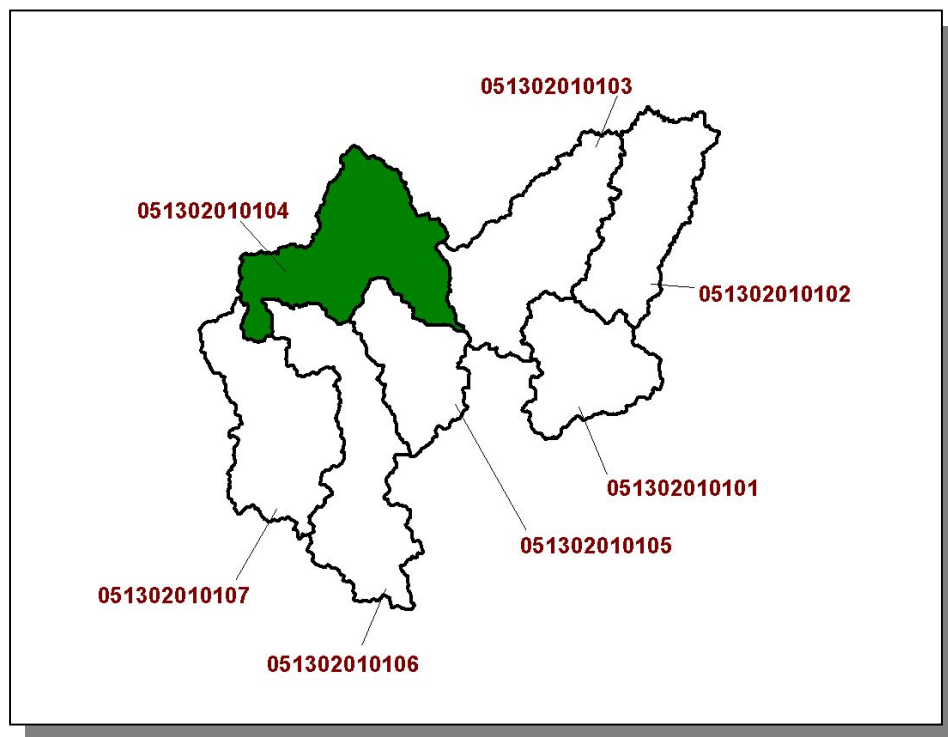
**Table 4-19. Forest Acreage and Annual Removal Rates (1987-1994) in Macon, Smith, Trousdale, and Wilson Counties.**

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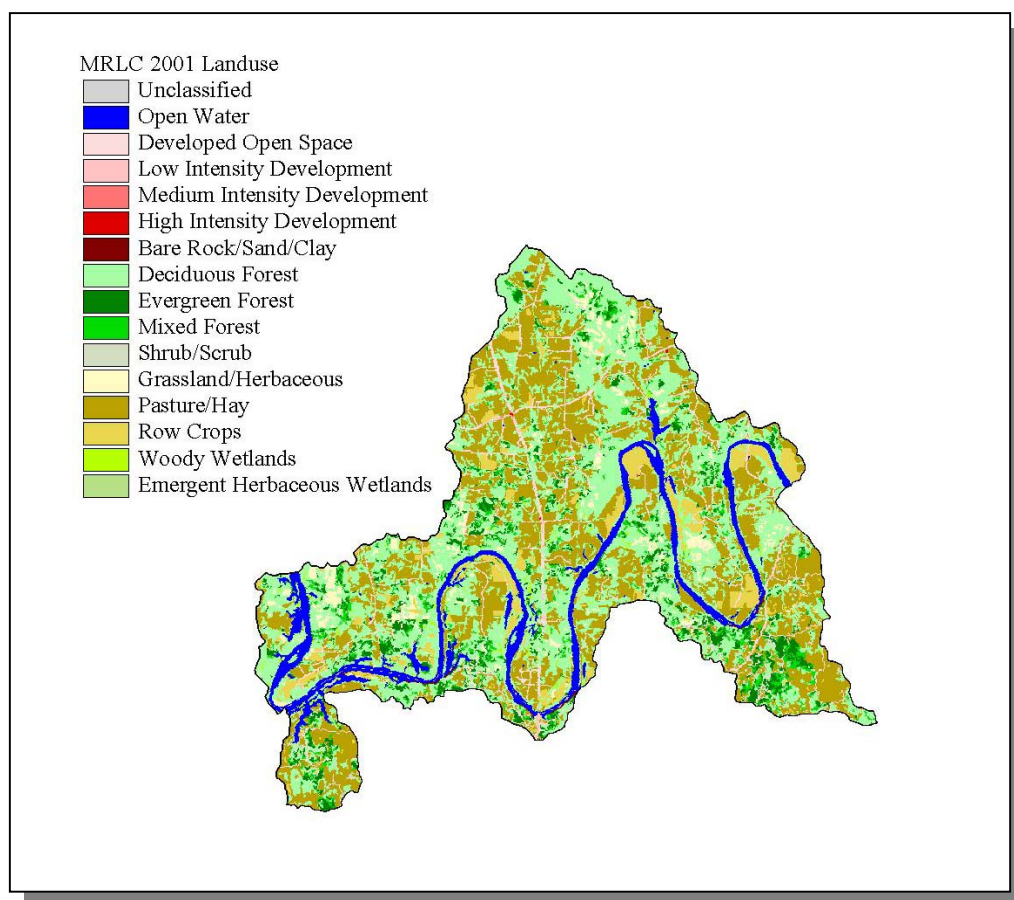
<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Legumes (Pastureland)	0.40
Grass (Pastureland)	0.90
Grass (Hayland)	0.12
Legumes, Grass (Hayland)	0.23
Legumes (Hayland)	0.13
Grass, Forbs, Legumes (Mixed Pasture)	0.55
Corn (Row Crops)	3.47
Soybeans (Row Crops)	6.38
Tobacco (Row Crops)	7.20
Wheat (Close-Grown Cropland)	3.00
All Other Close-Grown Cropland	2.49
Other Vegetable and Truck Crops	5.48
Conservation Reserve Program Lands	0.28
Farmsteads and Ranch Headquarters	0.31

**Table 4-20. Annual Estimated Total Soil Loss in Subwatershed 051302010103.**

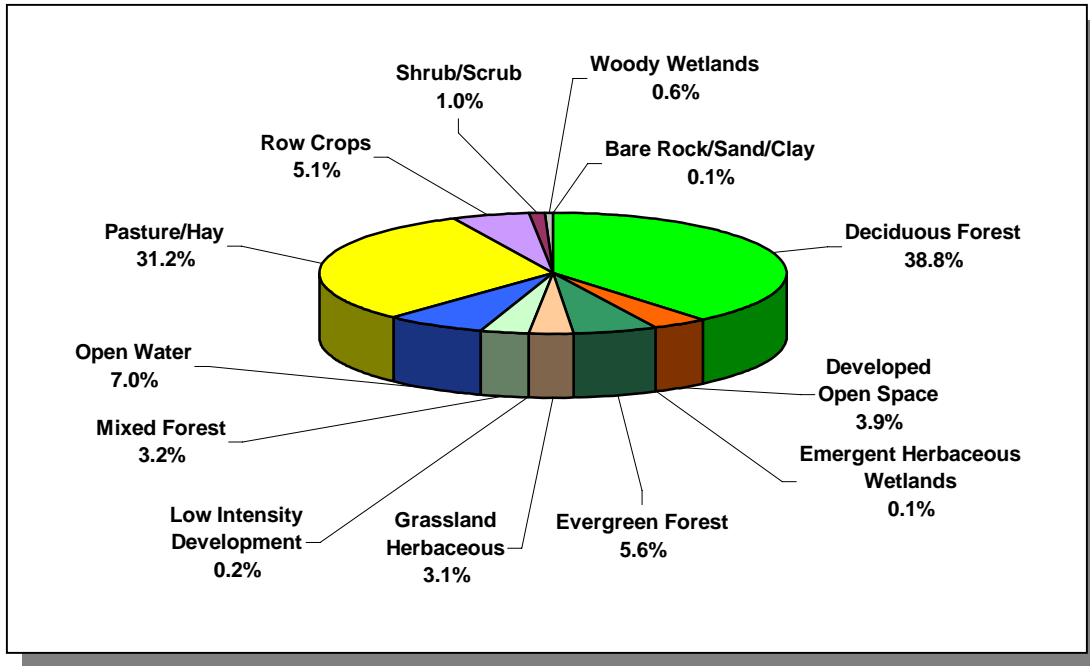
**4.2.A.iv. 051302010104 (Cumberland River).**



**Figure 4-26. Location of Subwatershed 051302010104.** All HUC-12 subwatershed boundaries are shown for reference.



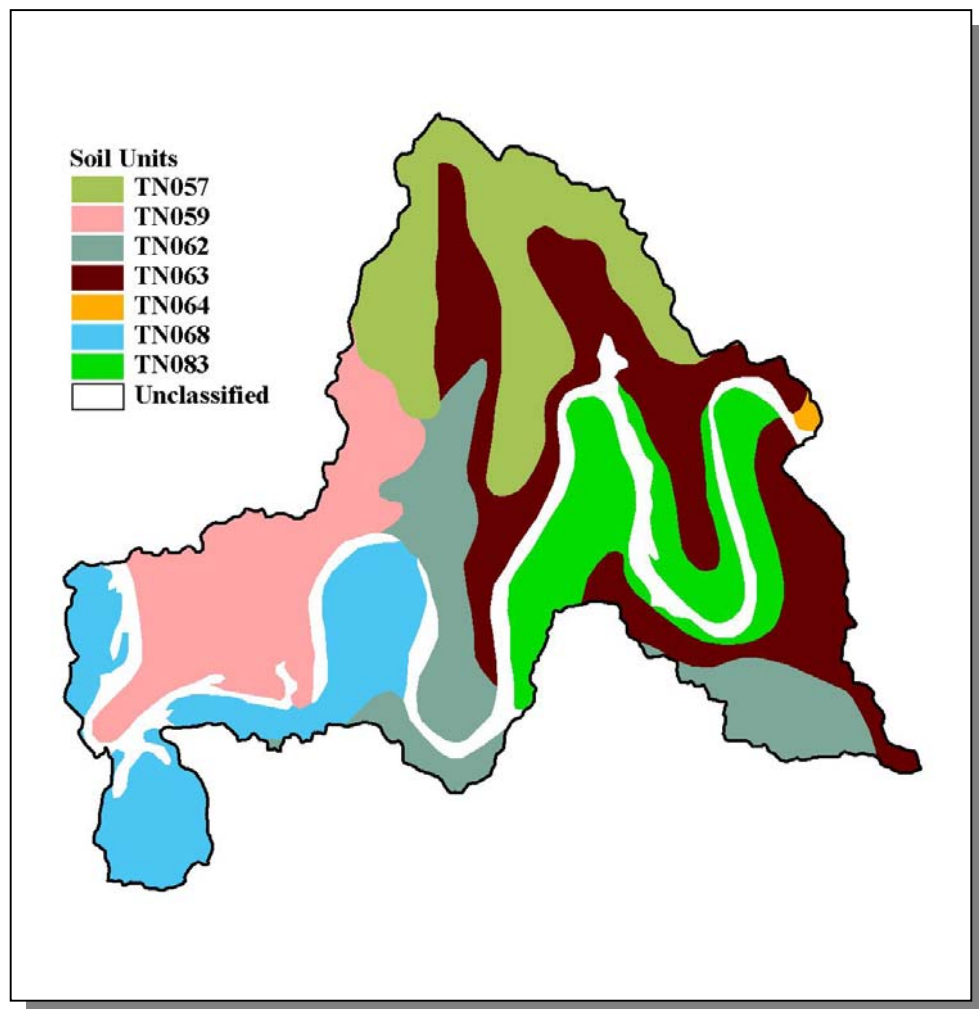
**Figure 4-27. Illustration of Land Use Distribution in Subwatershed 051302010104.**



**Figure 4-28. Land Use Distribution in Subwatershed 051302010104.** More information is provided in Appendix IV.



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**Figure 4-29. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010104.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN059	0.00	C	1.08	5.70	Silty Clayey Loam	0.35
TN062	0.00	C	0.98	4.40	Clayey Loam	0.26
TN063	0.00	C	1.19	5.72	Clayey Loam	0.32
TN064	7.00	C	1.19	5.82	Silty Loam	0.37
TN068	0.00	B	1.35	5.38	Silty Loam	0.37
TN083	9.00	C	1.32	5.97	Silty Loam	0.36

**Table 4-21. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010104.** The definition of "Hydrologic Group" is provided in Appendix IV.

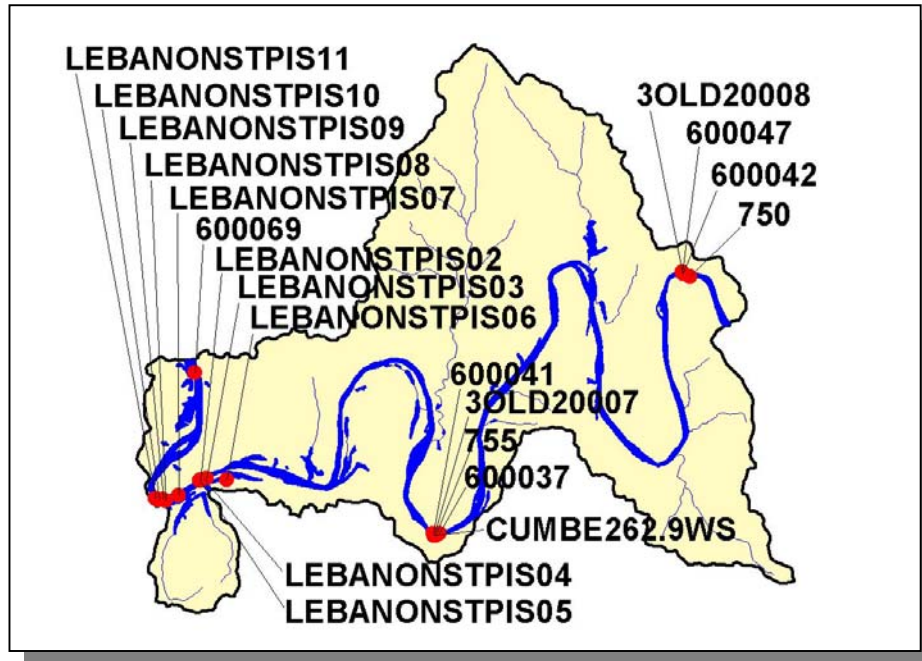
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Sumner	103,281	121,936	130,449	2.41	2,485	2,934	3,138	26.3
Trousdale	5,920	6,748	7,259	29.68	1,757	2,003	2,154	22.6
<b>Total</b>	<b>109,201</b>	<b>128,684</b>	<b>137,708</b>		<b>4,242</b>	<b>4,937</b>	<b>5,292</b>	<b>24.8</b>

*Table 4-22. Population Estimates in Subwatershed 051302010104.*

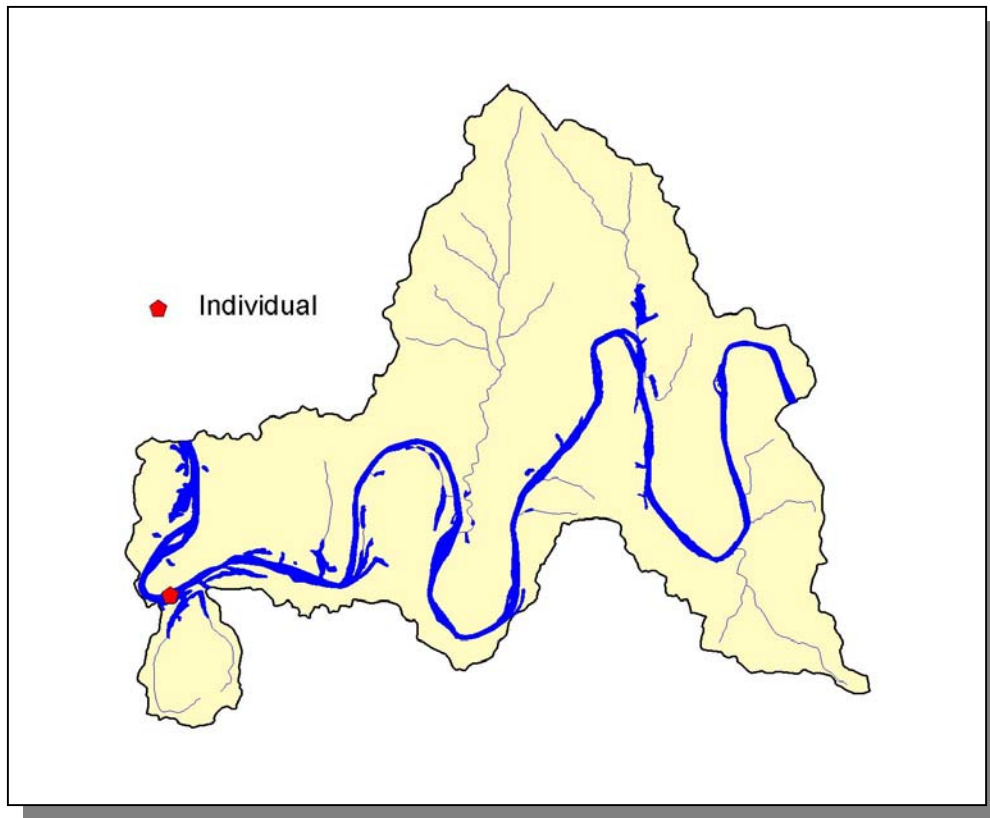
			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Hartsville	Trousdale	2,188	964	907	57	0

*Table 4-23. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051302010104.*

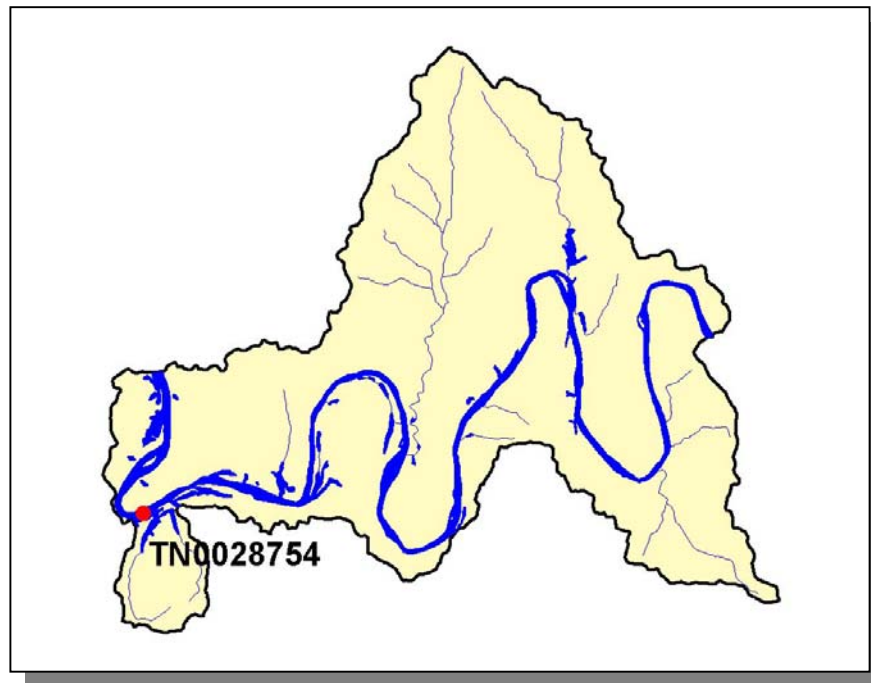


*Figure 4-30. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010104. More information, including site names and locations, is provided in Appendix IV.*

**4.2.A.iv.a. Point Source Contributions.**



**Figure 4-31. Location of Permits Issued in Subwatershed 051302010104.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-32. Location of Active NPDES Sites in Subwatershed 051302010104.** More information, including the names of facilities, is provided in Appendix IV.

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**4.2.A.iv.b. Nonpoint Source Contributions.**

<b>LIVESTOCK COUNTS</b>					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
3,432	6,116	117	7	136	82

**Table 4-24. Summary of Livestock Count Estimates in Subwatershed 051302010104.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

<b>LIVESTOCK COUNTS</b>						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Sumner	22,296	45,116	1,515	50	2,500	189
Trousdale	6,672	11,344	135	243	112	195
Wilson	27,209	51,090	1,505	1,585	1,700	465

**Table 4-25. Summary of Livestock Count Estimates in Sumner, Trousdale and Wilson Counties.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

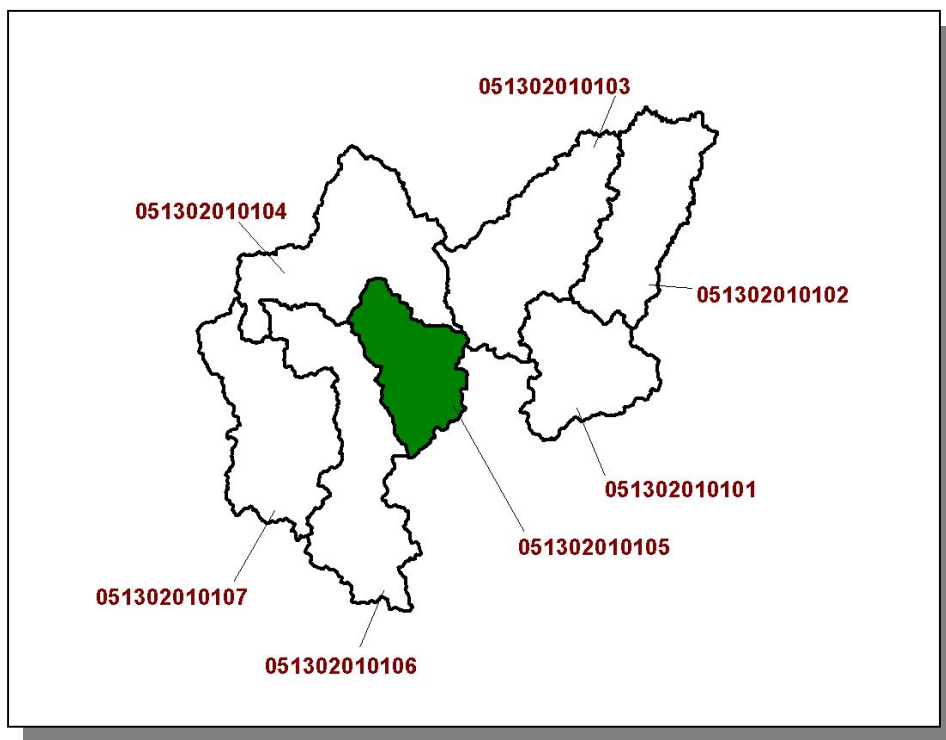
County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Sumner	88.2	88.2	2.0	6.3
Trousdale	30.0	30.0	0.1	0.4
Wilson	98.1	97.0	1.7	6.8

**Table 4-26. Forest Acreage and Annual Removal Rates (1987-1994) in Sumner, Trousdale, and Wilson Counties.**

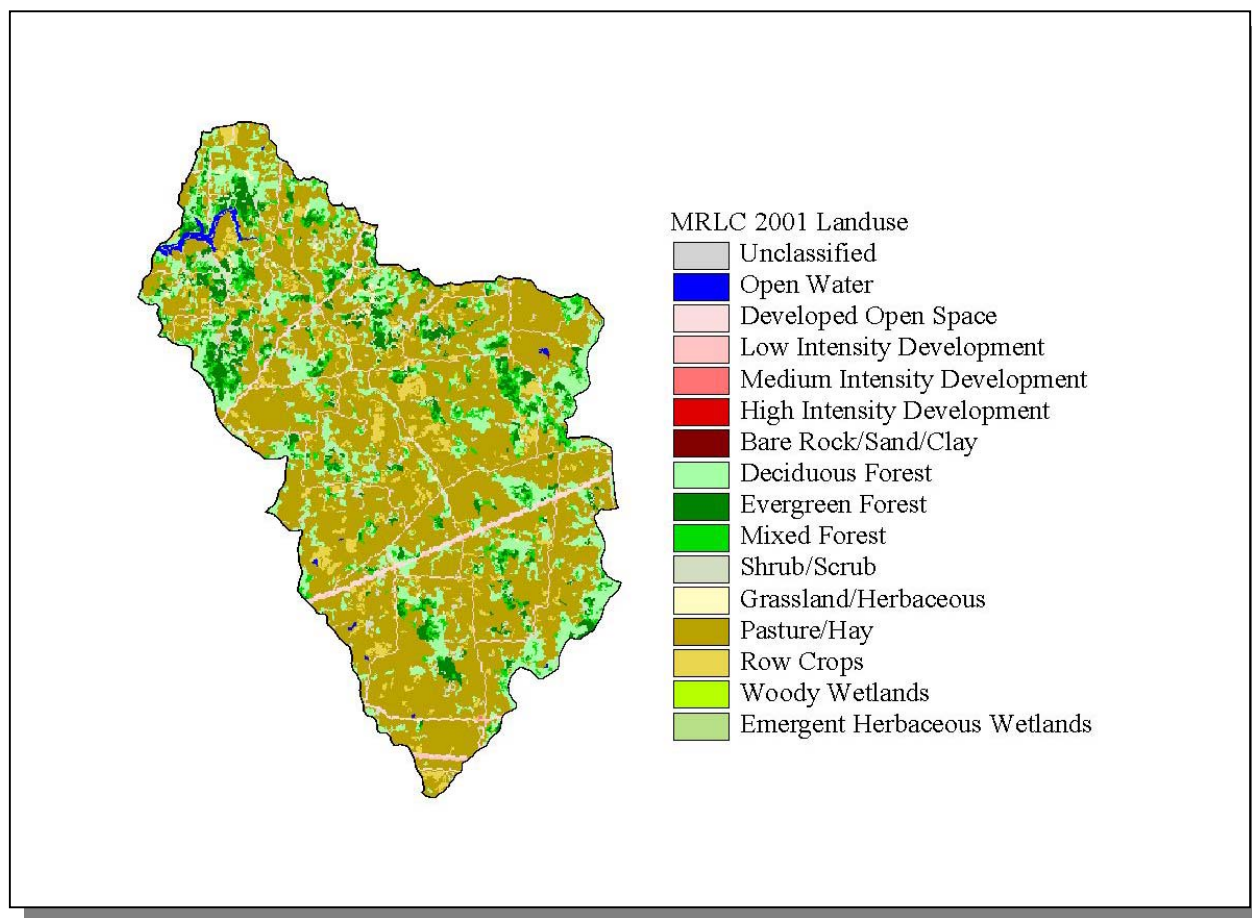
<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Legumes (Pastureland)	0.43
Grass (Pastureland)	0.45
Grass (Hayland)	0.22
Legumes, Grass (Hayland)	0.33
Legumes (Hayland)	0.12
Grass, Forbs, Legumes (Mixed Pasture)	0.57
Corn (Row Crops)	6.34
Soybeans (Row Crops)	8.57
Tobacco (Row Crops)	11.07
Wheat (Close-Grown Cropland)	1.97
All Other Close-Grown Cropland	2.49
Other Cropland not Planted	19.23
Conservation Reserve Program Lands	0.26
Farmsteads and Ranch Headquarters	0.25

**Table 4-27. Annual Estimated Total Soil Loss in Subwatershed 051302010104.**

**4.2.A.v. 051302010105 (Cedar Creek).**

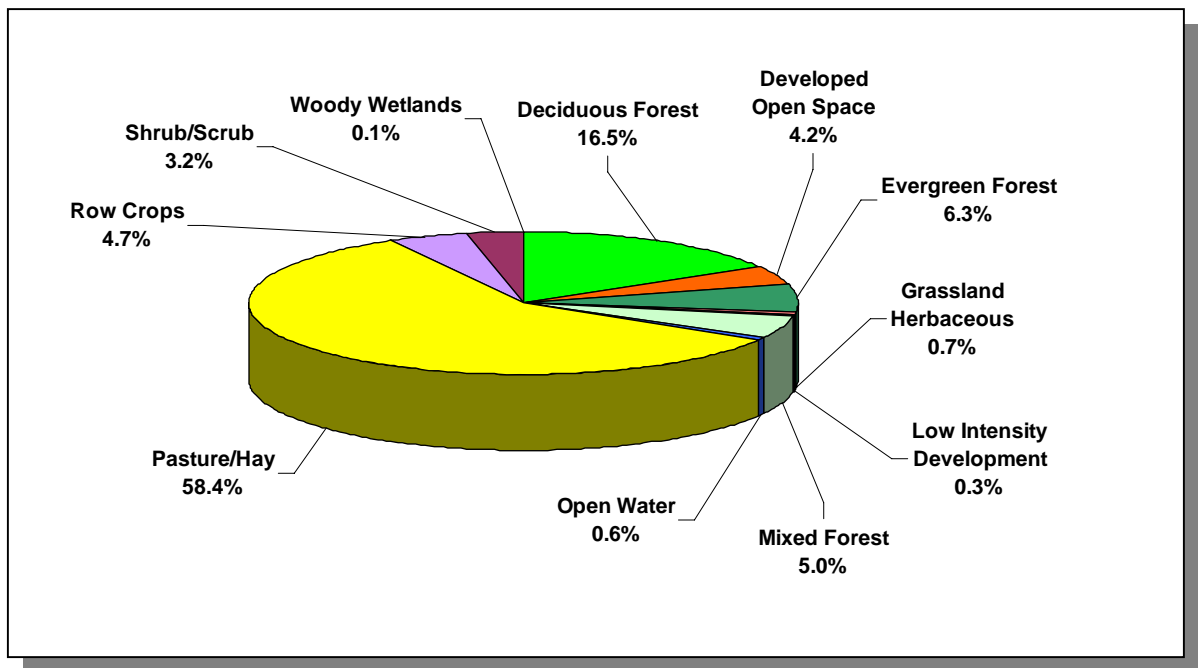


**Figure 4-33. Location of Subwatershed 051302010105.** All HUC-12 subwatershed boundaries are shown for reference.



**Figure 4-34. Illustration of Land Use Distribution in Subwatershed 051302010105.**

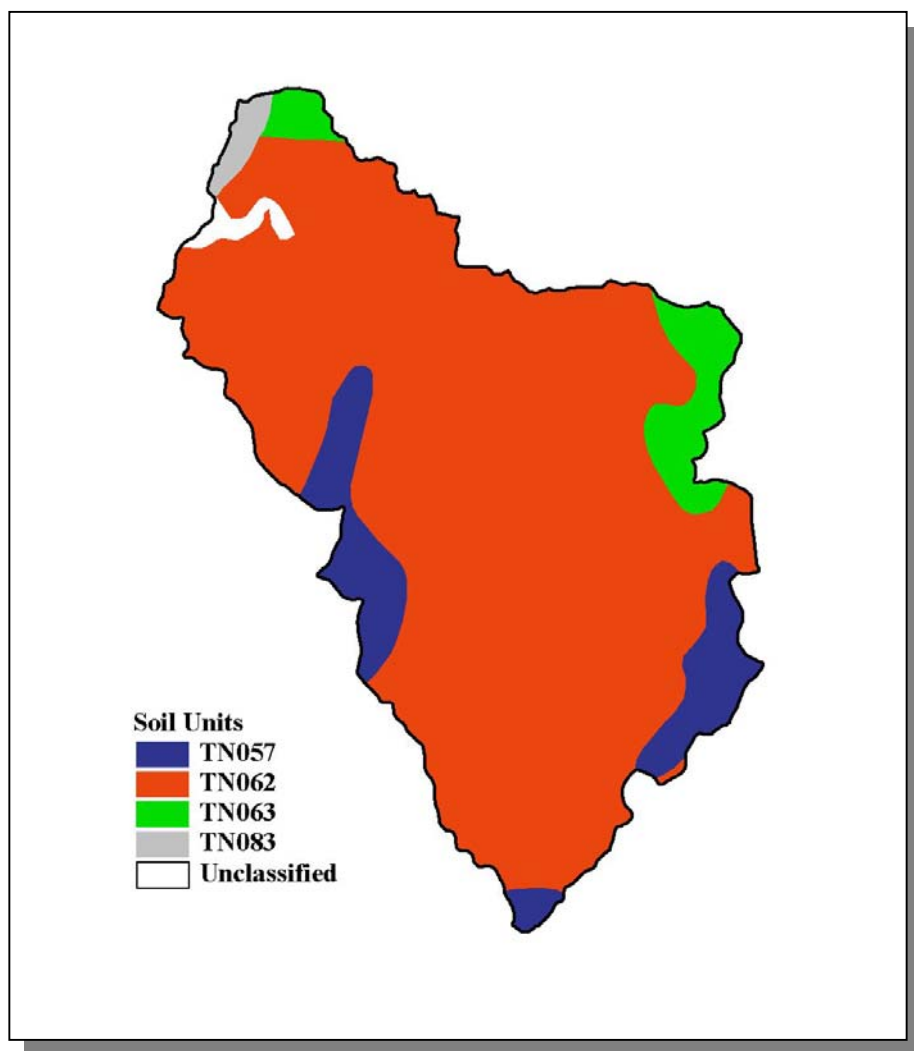
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**Figure 4-35. Land Use Distribution in Subwatershed 051302010105.** More information is provided in Appendix IV.



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**Figure 4-36. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010105.**

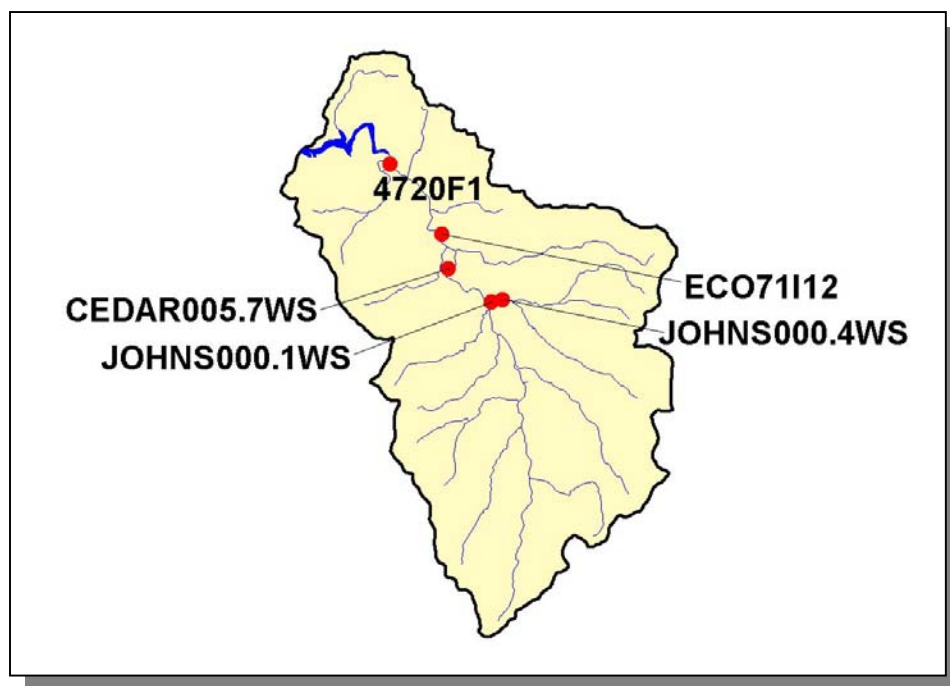
STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN062	0.00	C	0.98	4.40	Clayey Loam	0.26
TN063	0.00	C	1.19	5.72	Clayey Loam	0.32
TN083	9.00	C	1.32	5.97	Silty Loam	0.36

**Table 4-28. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010105.** The definition of "Hydrologic Group" is provided in Appendix IV.

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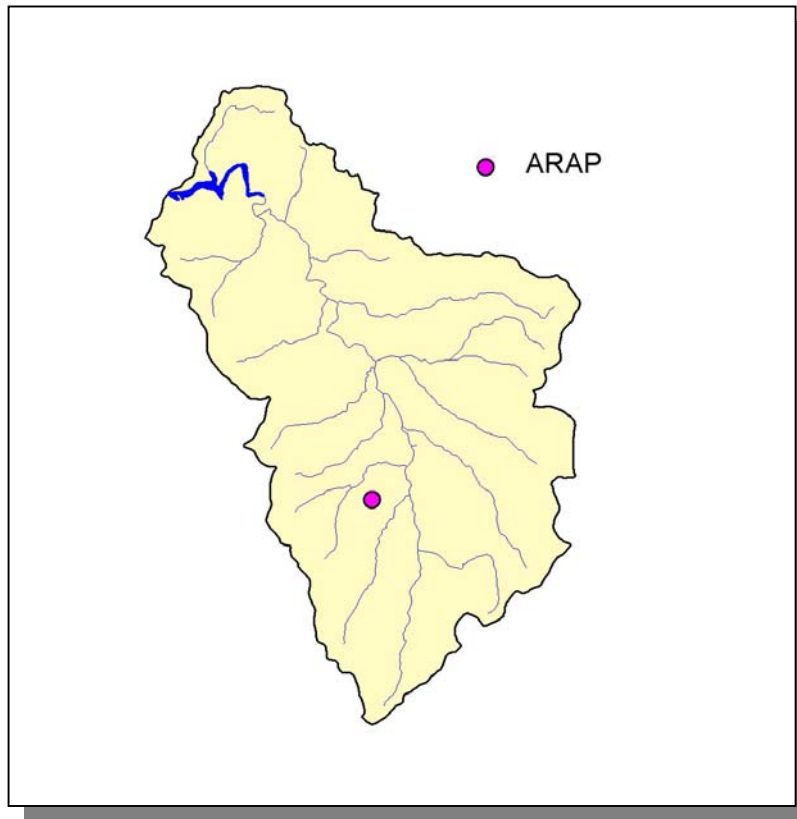
County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Trousdale	5,920	6,748	7,259	0.38	22	25	27	22.7

**Table 4-29. Population Estimates in Subwatershed 051302010105.**

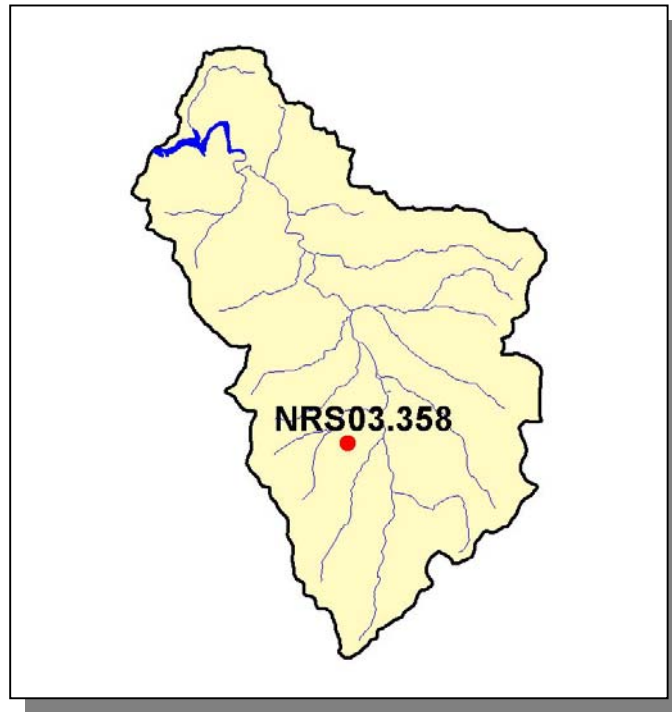


**Figure 4-37. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010105.** More information, including site names and locations, is provided in Appendix IV.

**4.2.A.v.a. Point Source Contributions.**



**Figure 4-38. Location of Permits Issued in Subwatershed 051302010105.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-39. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 051302010105. More information is provided in Appendix IV.**

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**4.2.A.v.b. Nonpoint Source Contributions.**

<b>LIVESTOCK COUNTS</b>					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
2,461	4,615	135	8	152	43

**Table 4-30. Summary of Livestock Count Estimates in Subwatershed 051302010105.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

<b>LIVESTOCK COUNTS</b>						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Trousdale	6,672	11,344	135	243	112	195
Wilson	27,209	51,090	1,505	1,585	1,700	465

**Table 4-31. Summary of Livestock Count Estimates in Trousdale and Wilson Counties.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

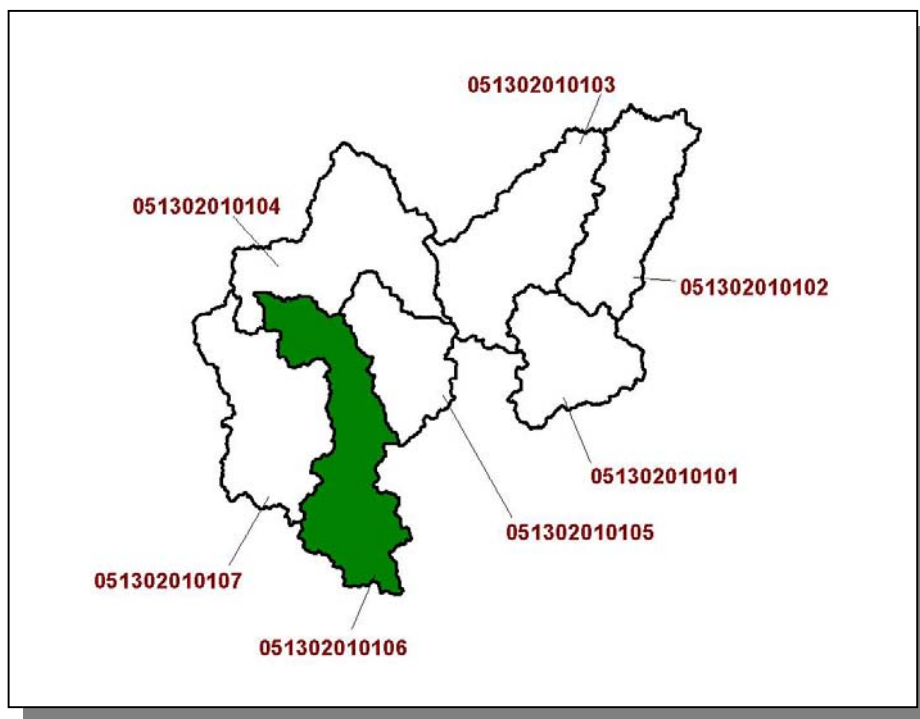
County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Trousdale	30.0	30.0	0.1	0.4
Wilson	98.1	97.0	1.7	6.8

**Table 4-32. Forest Acreage and Annual Removal Rates (1987-1994) in Trousdale and Wilson Counties.**

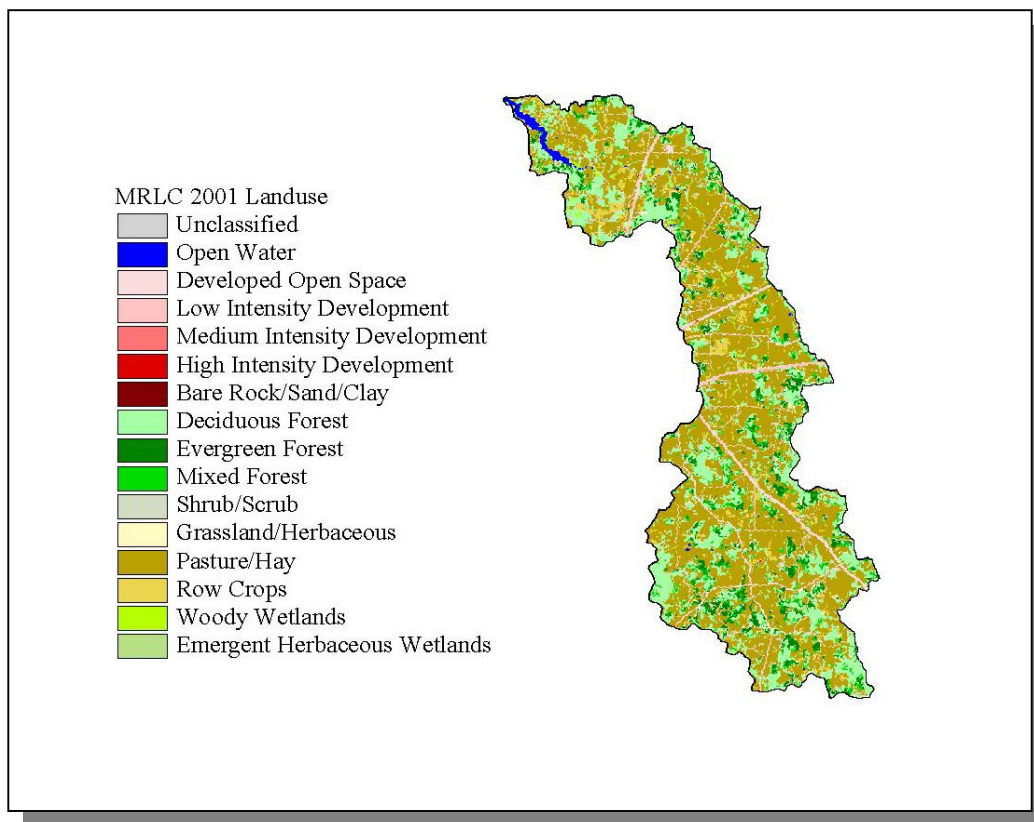
<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Legumes (Pastureland)	0.43
Grass (Pastureland)	0.42
Grass (Hayland)	0.37
Legumes, Grass (Hayland)	0.37
Grass, Forbs, Legumes (Mixed Pasture)	0.91
Corn (Row Crops)	2.22
Soybeans (Row Crops)	6.72
Tobacco (Row Crops)	19.07
Wheat (Close-Grown Cropland)	1.96
All Other Close-Grown Cropland	2.49
Farmsteads and Ranch Headquarters	0.26

**Table 4-33. Annual Estimated Total Soil Loss in Subwatershed 051302010105.**

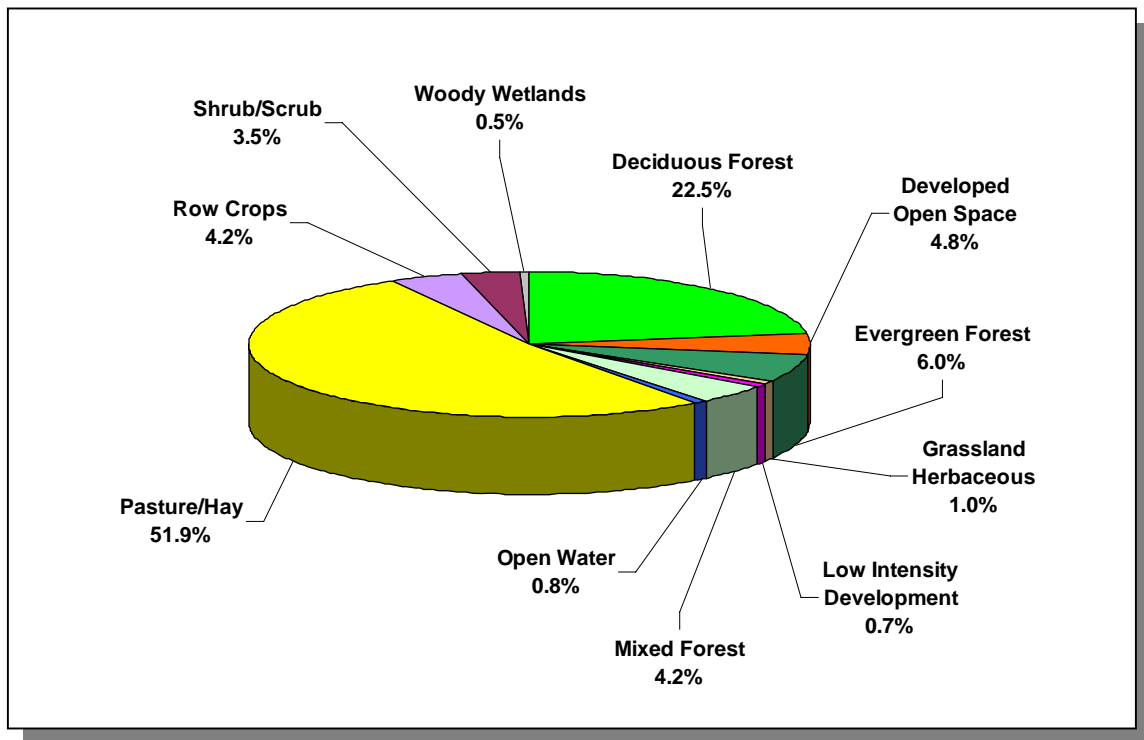
**4.2.A.vi. 051302010106 (Spring Creek).**



**Figure 4-40. Location of Subwatershed 051302010106.** All HUC-12 subwatershed boundaries are shown for reference.



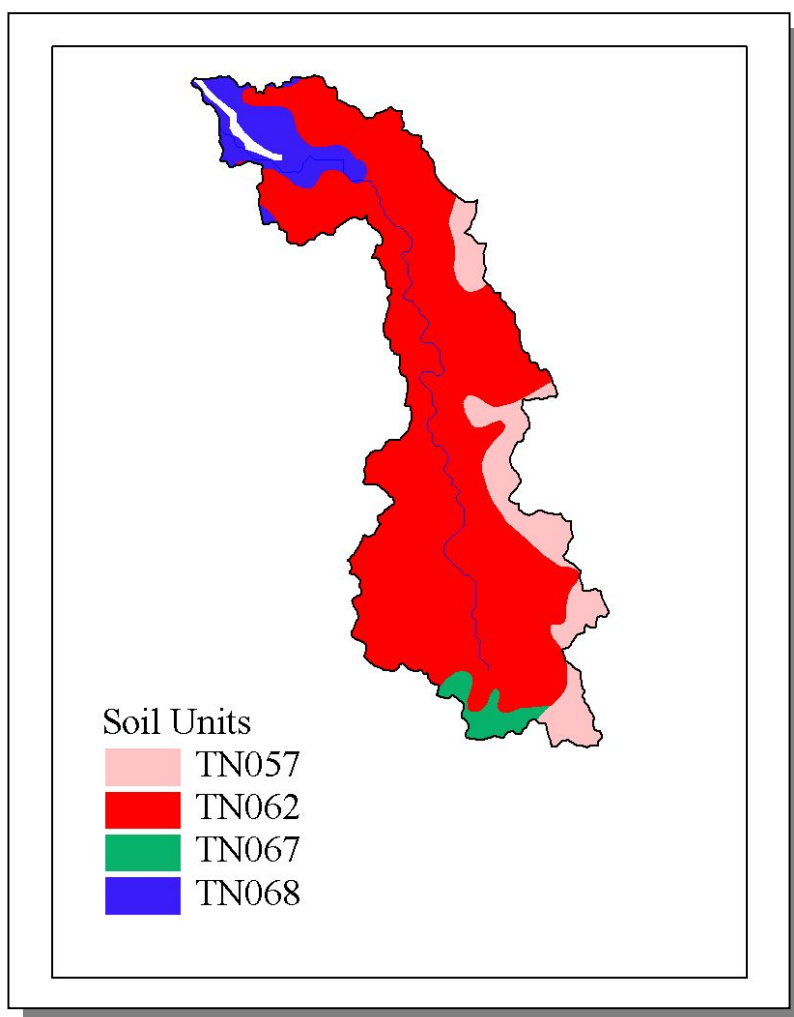
**Figure 4-41. Illustration of Land Use Distribution in Subwatershed 051302010106.**



**Figure 4-42. Land Use Distribution in Subwatershed 051302010106.** More information is provided in Appendix IV.



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**Figure 4-43. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010106.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN062	0.00	C	0.98	4.40	Clayey Loam	0.26
TN067	2.00	C	2.69	5.51	Silty Loam	0.35
TN068	0.00	B	1.35	5.38	Silty Loam	0.37

**Table 4-34. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010106.** The definition of “Hydrologic Group” is provided in Appendix IV.

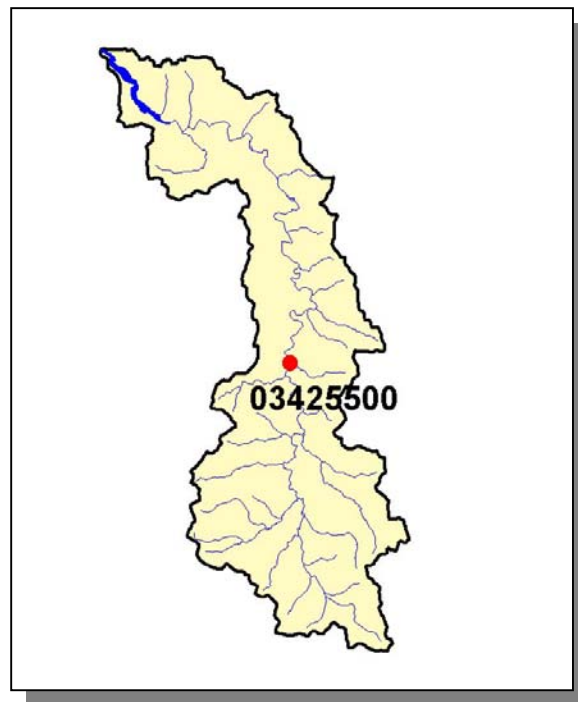
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Sumner	103,281	121,936	130,449	0.02	21	24	26	23.8

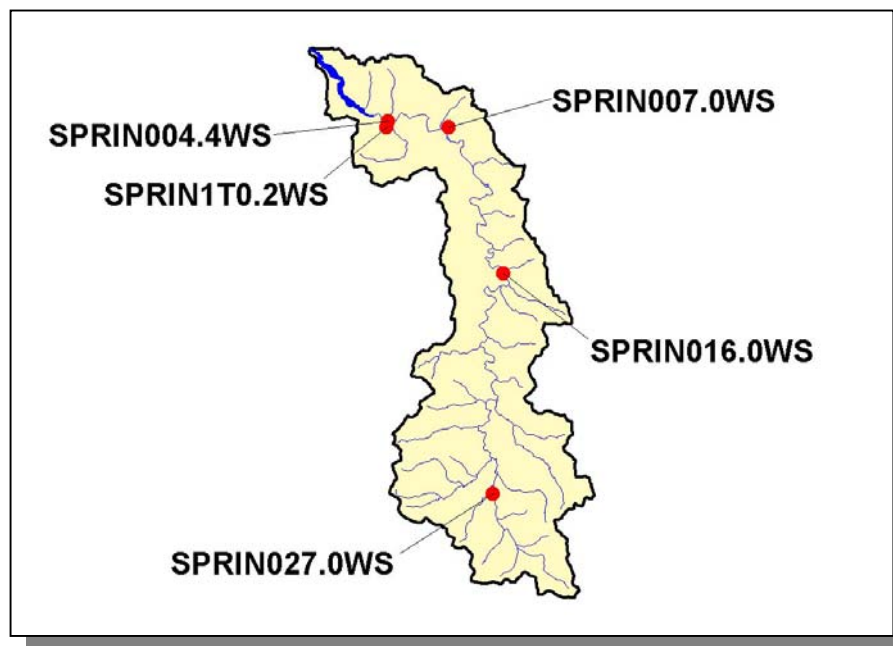
**Table 4-35. Population Estimates in Subwatershed 051302010106.**

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Lebanon	Wilson	15,208	6,592	5,440	1,137	15

**Table 4-36. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051302010106.**

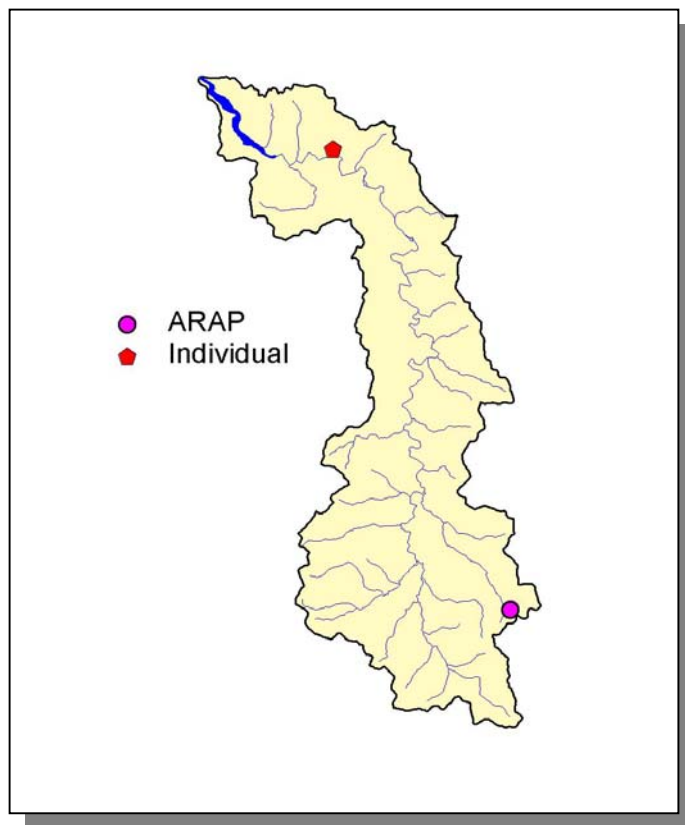


**Figure 4-44. Location of Historical Streamflow Data Collection Sites in Subwatershed 051302010106.** More information is provided in Appendix IV.

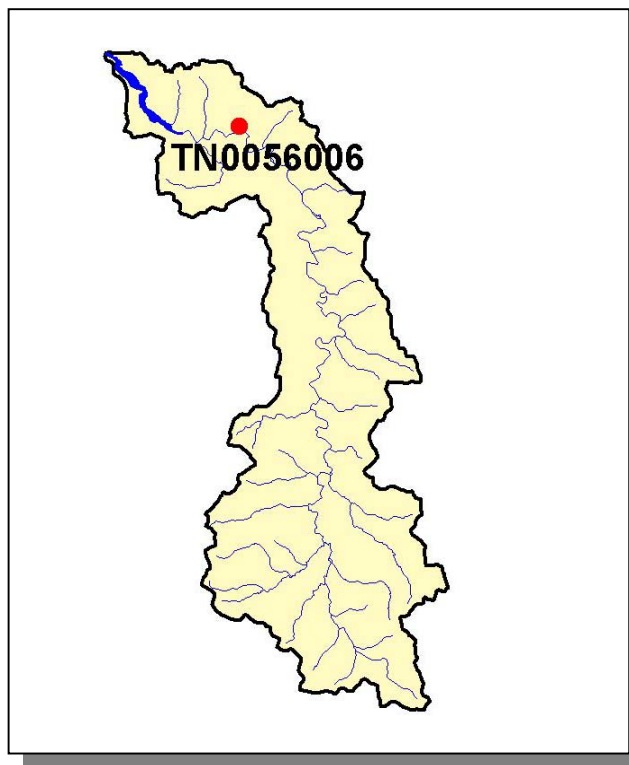


**Figure 4-45. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010106.** More information, including site names and locations, is provided in Appendix IV.

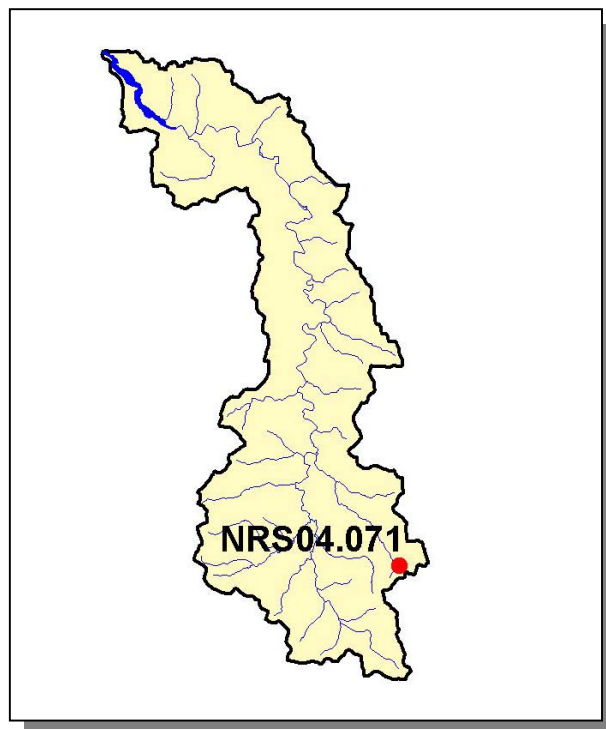
**4.2.A.vi.a. Point Source Contributions.**



**Figure 4-46. Location of Permits Issued in Subwatershed 051302010106.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-47. Location of Active NPDES Sites in Subwatershed 051302010106.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-48. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 051302010106.** More information is provided in Appendix IV.

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**4.2.A.vi.b. Nonpoint Source Contributions.**

<b>LIVESTOCK</b>					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
3,890	7,305	215	12	243	66

**Table 4-37. Summary of Livestock Count Estimates in Subwatershed 051302010106.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

<b>LIVESTOCK COUNTS</b>						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Sumner	22,296	45,116	1,515	50	2,500	189
Wilson	27,209	51,090	1,505	1,585	1,700	465

**Table 4-38. Summary of Livestock Count Estimates in Sumner and Wilson Counties.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

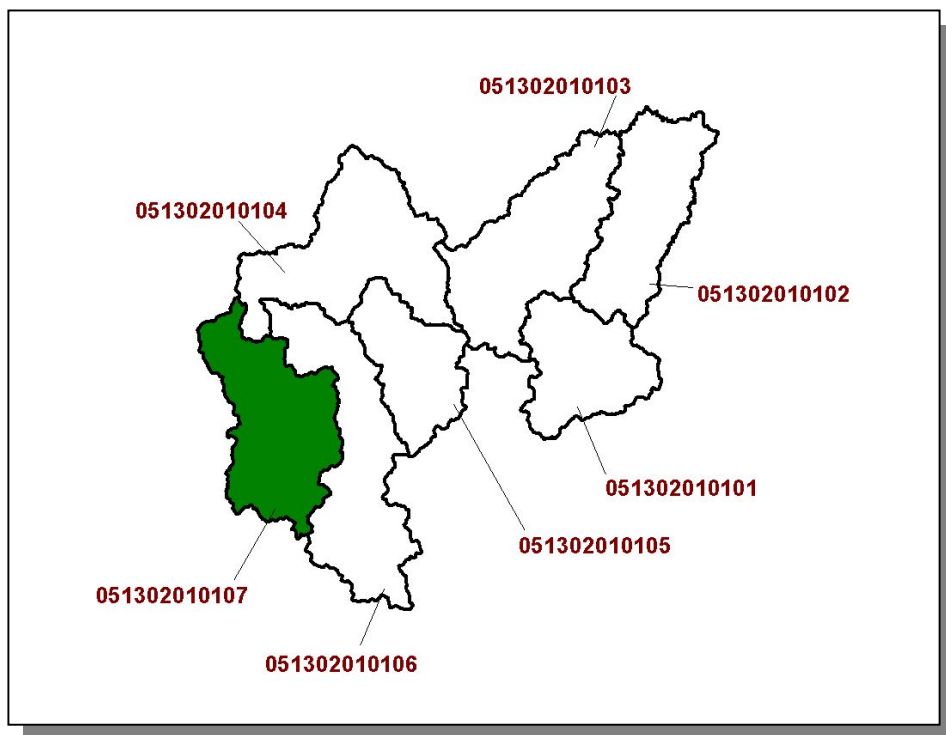
County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Sumner	88.2	88.2	2.0	6.3
Wilson	98.1	97.0	1.7	6.8

**Table 4-39. Forest Acreage and Annual Removal Rates (1987-1994) in Sumner and Wilson Counties.**

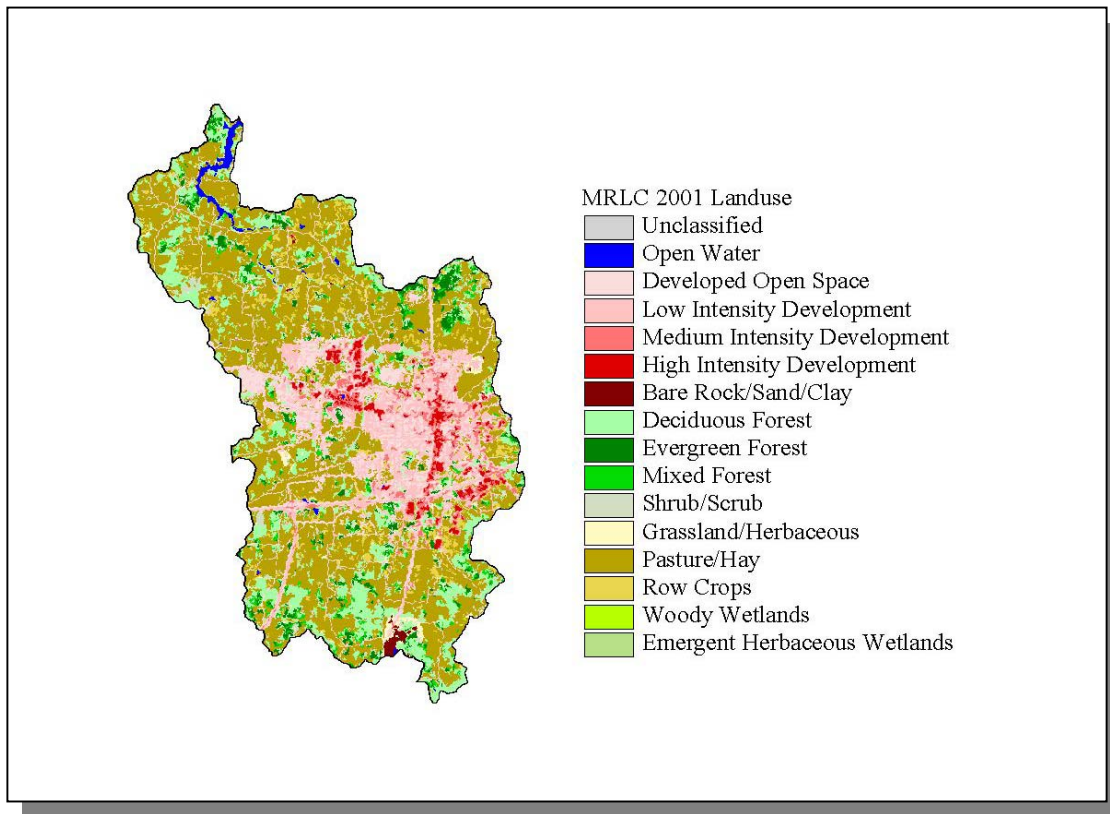
<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Grass (Pastureland)	0.42
Grass (Hayland)	0.37
Legumes, Grass (Hayland)	0.37
Legumes (Hayland)	0.12
Grass, Forbs, Legumes (Mixed Pasture)	0.91
Corn (Row Crops)	2.24
Soybeans (Row Crops)	6.73
Tobacco (Row Crops)	19.23
Wheat (Close-Grown Cropland)	1.96
All Other Close-Grown Cropland	2.49
Other Cropland not Planted	19.23
Conservation Reserve Program Lands	0.26
Farmsteads and Ranch Headquarters	0.26

**Table 4-40. Annual Estimated Total Soil Loss in Subwatershed 051302010106.**

**4.2.A.vii. 051302010107 (Bartons Creek).**



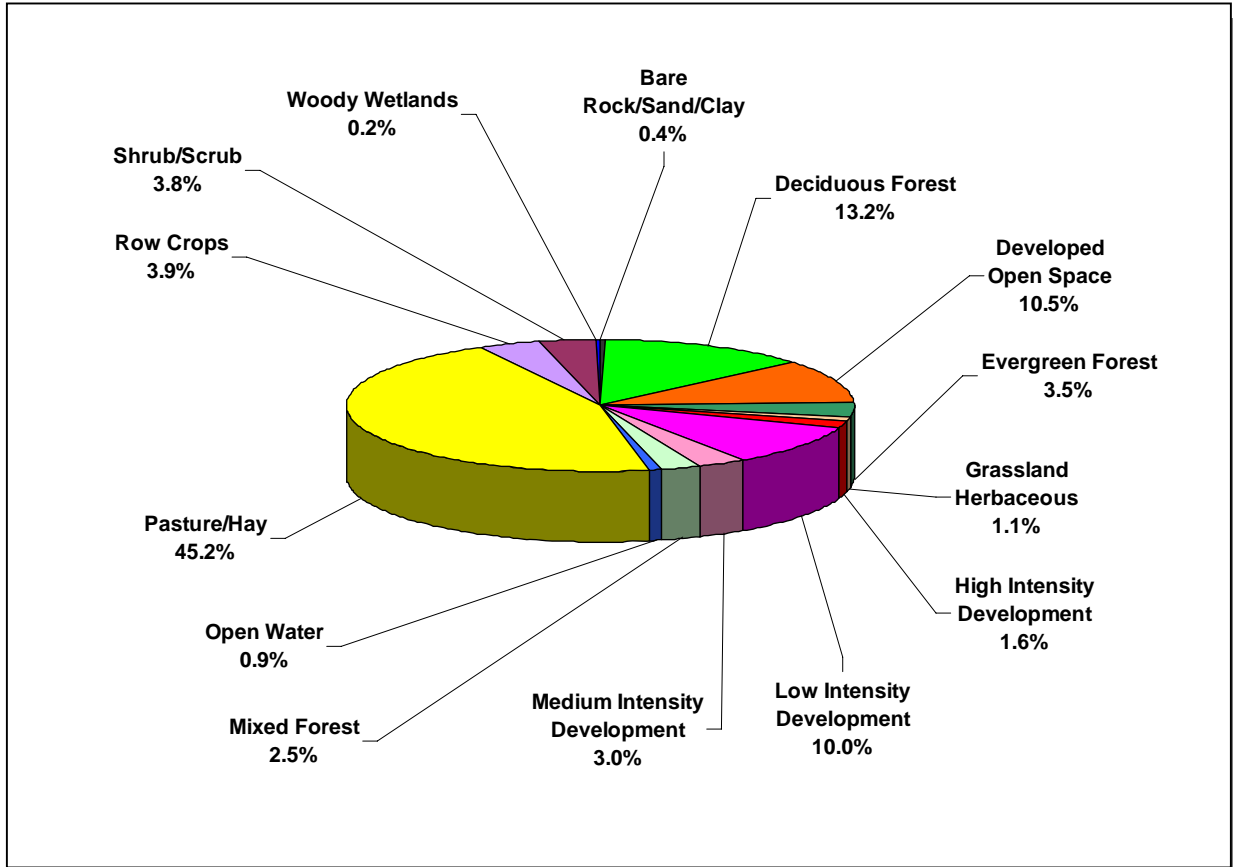
**Figure 4-49. Location of Subwatershed 051302010107.** All HUC-12 subwatershed boundaries are shown for reference.



**Figure 4-50. Illustration of Land Use Distribution in Subwatershed 051302010107.**

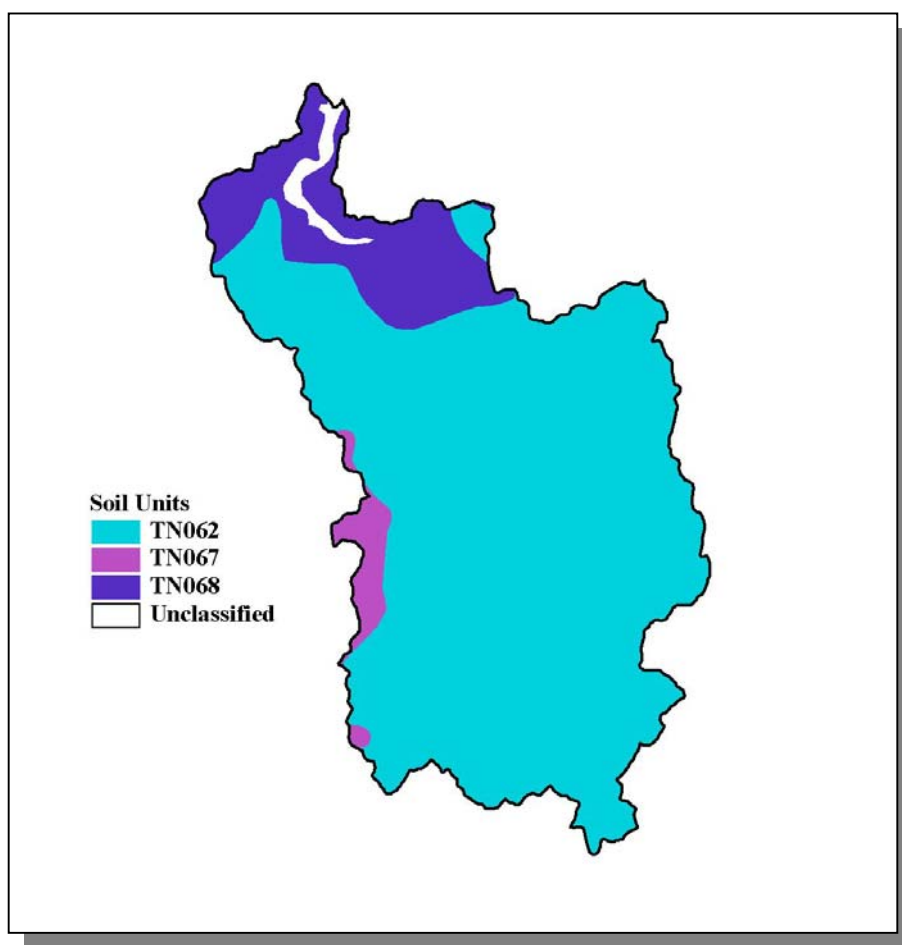


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**Figure 4-51. Land Use Distribution in Subwatershed 051302010107.** More information is provided in Appendix IV.

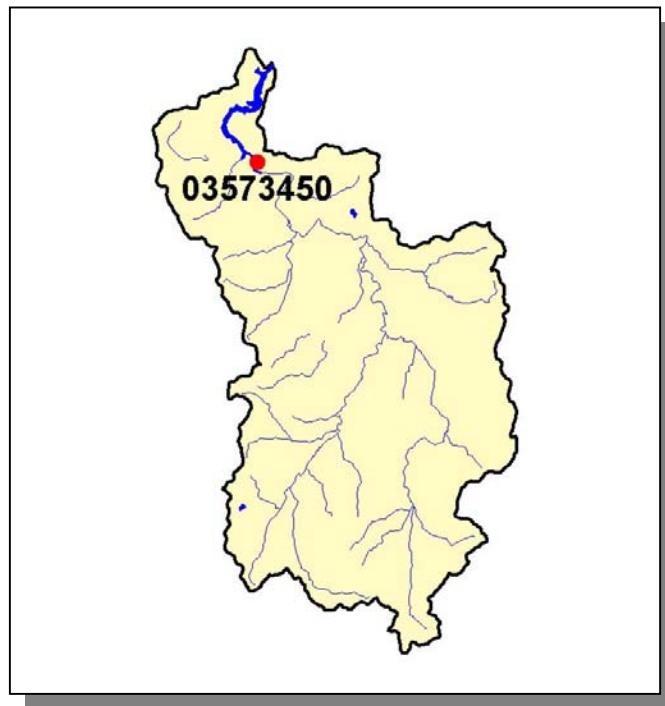
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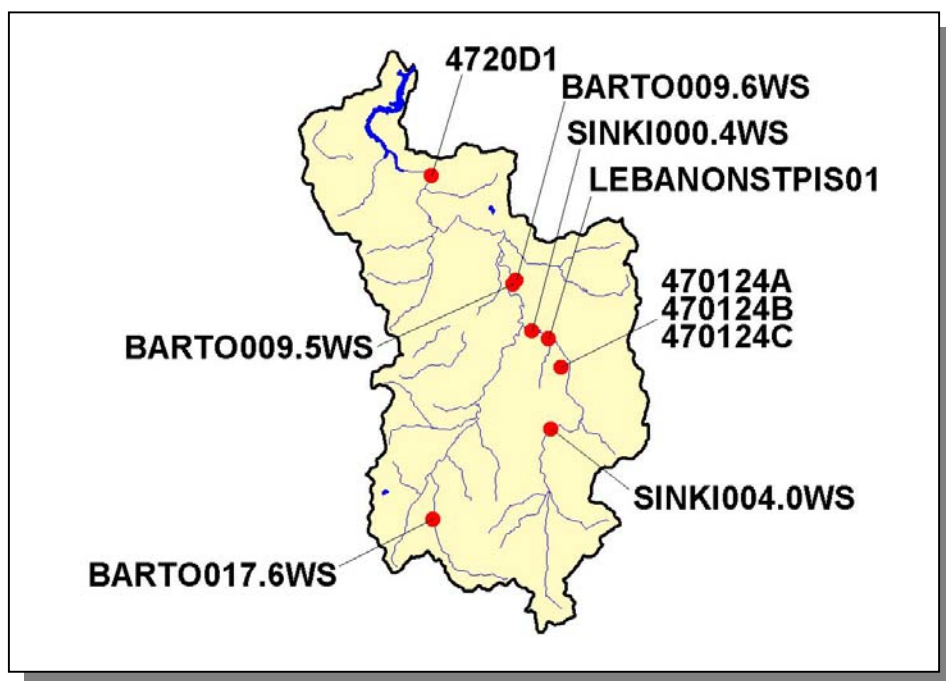
**Figure 4-52. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010107.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN062	0.00	C	0.98	4.40	Clayey Loam	0.26
TN067	2.00	C	2.69	5.51	Silty Loam	0.35
TN068	0.00	B	1.35	5.38	Silty Loam	0.37

**Table 4-41. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010107.** The definition of “Hydrologic Group” is provided in Appendix IV.

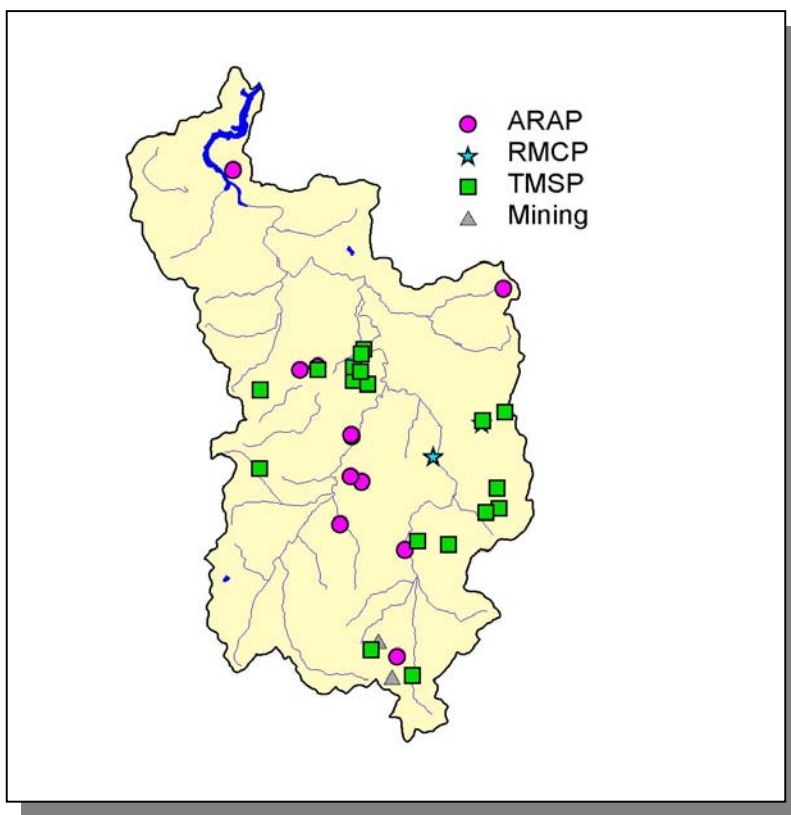


**Figure 4-53. Location of Historical Streamflow Data Collection Sites in Subwatershed 051302010107.** More information is provided in Appendix IV.

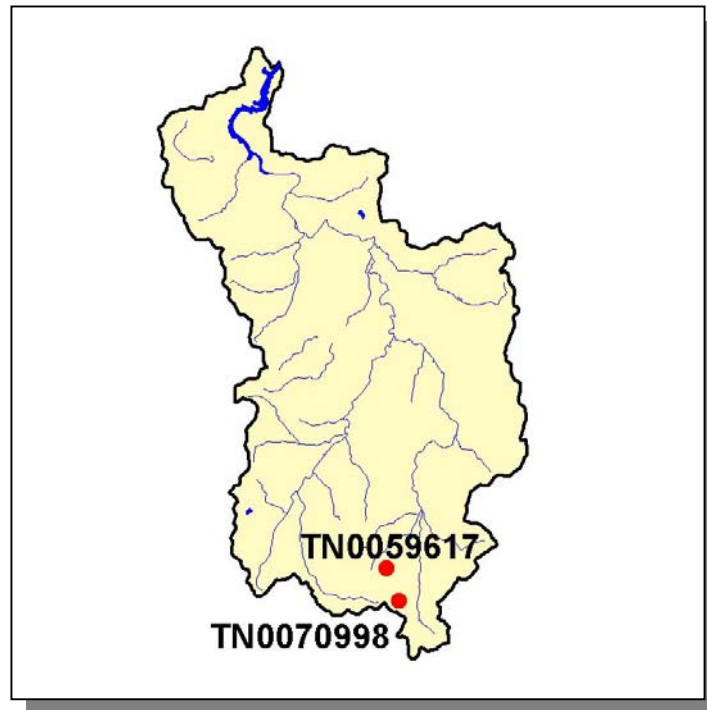


**Figure 4-54. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010107.** More information, including site names and locations, is provided in Appendix IV.

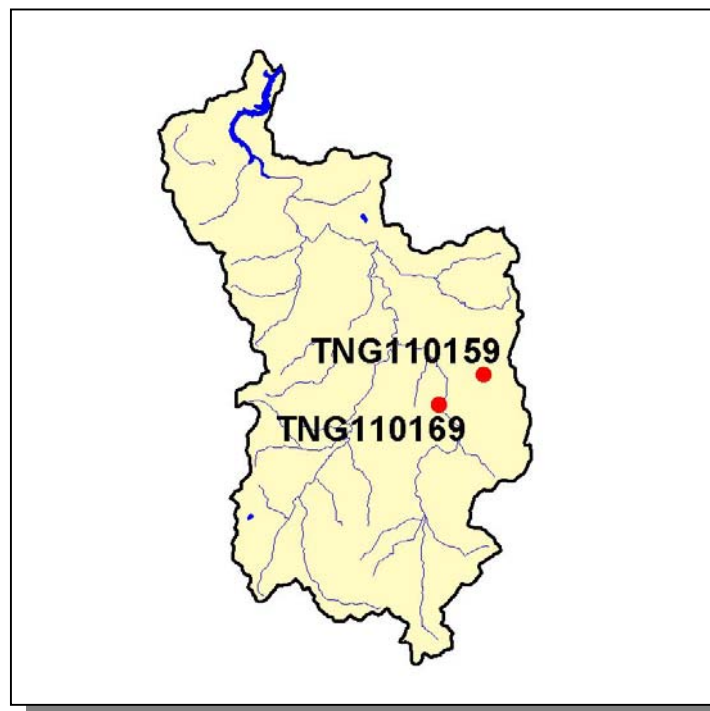
**4.2.A.vii.a. Point Source Contributions.**



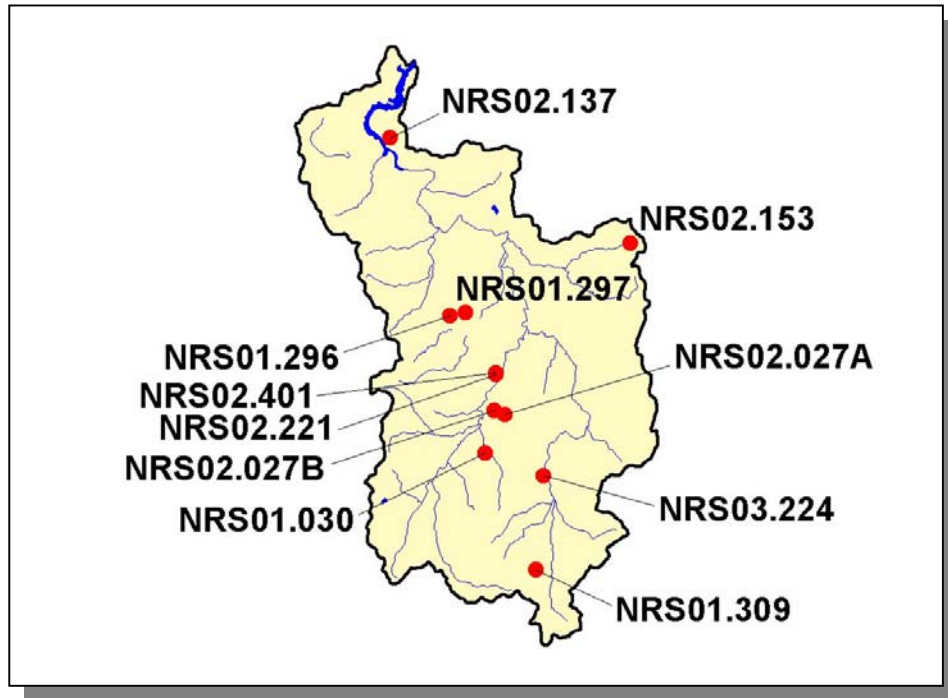
**Figure 4-55. Location of Permits Issued in Subwatershed 051302010107.** More information, including the names of facilities, is provided in Appendix IV.



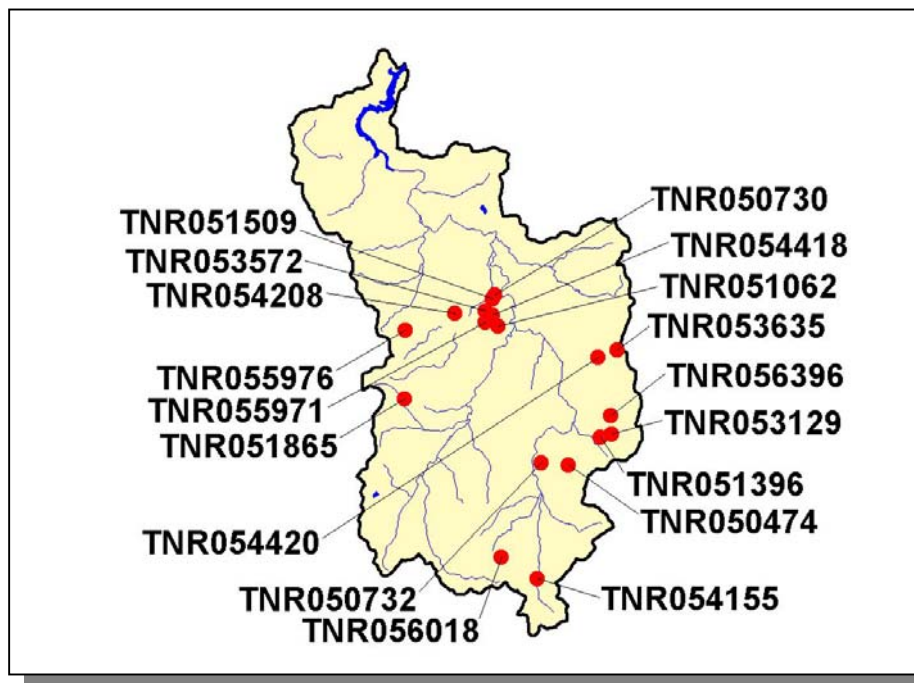
**Figure 4-56. Location of Active Mining Sites in Subwatershed 051302010107.** More information, including the names of mining operations, is provided in Appendix IV.



**Figure 4-57. Location of Ready Mix Concrete Plants (RMCP) in Subwatershed 051302010107.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-58. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 051302010107.** More information is provided in Appendix IV.



**Figure 4-59. Location of TMSP Sites in Subwatershed 051302010107.** More information, including the names of facilities, is provided in Appendix IV.

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**4.2.A.vii.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
2,958	5,554	164	9	185	51

**Table 4-42. Summary of Livestock Count Estimates in Subwatershed 051302010107.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Wilson	27,209	51,090	1,505	1,585	1,700	465

**Table 4-43. Summary of Livestock Count Estimates in Wilson County.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

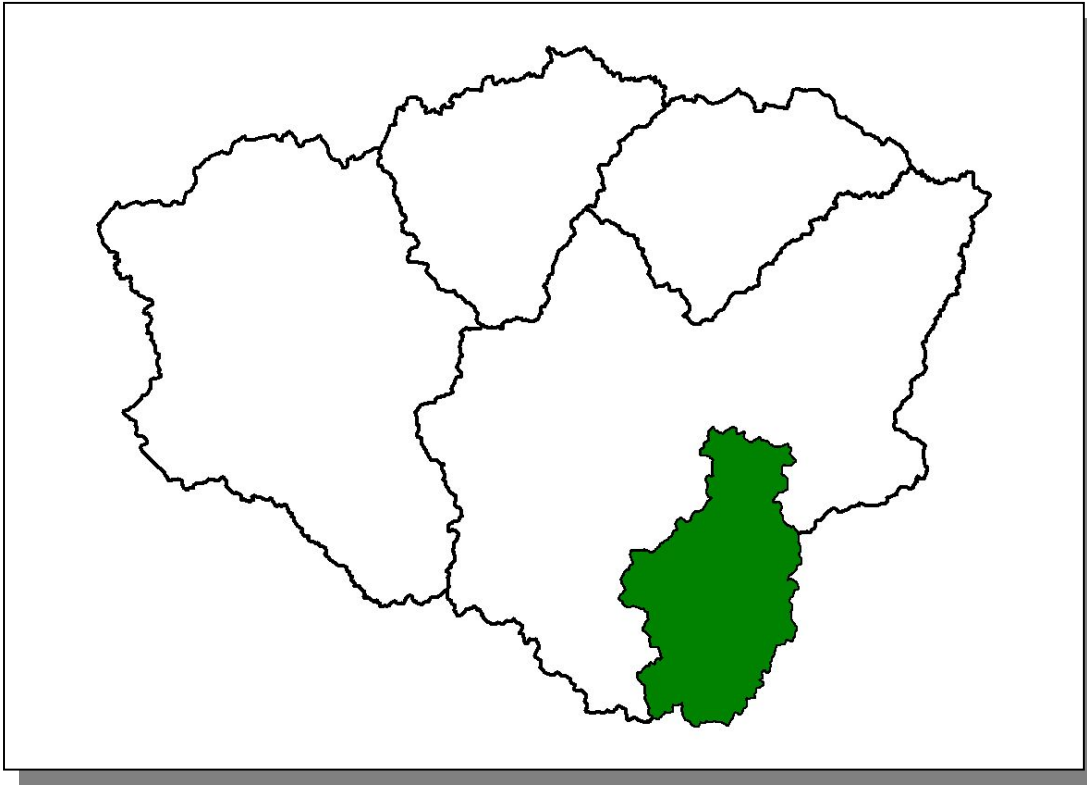
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Wilson	98.1	97.0	1.7	6.8

**Table 4-44. Forest Acreage and Annual Removal Rates (1987-1994) in Wilson County.**

CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.42
Grass (Hayland)	0.37
Legumes, Grass (Hayland)	0.38
Grass, Forbs, Legumes (Mixed Pasture)	0.91
Corn (Row Crops)	2.22
Soybeans (Row Crops)	6.72
Tobacco (Row Crops)	19.23
Wheat (Close-Grown Cropland)	1.96
All Other Close-Grown Cropland	2.49
Farmsteads and Ranch Headquarters	0.26

**Table 4-45. Annual Estimated Total Soil Loss in Subwatershed 051302010107.**

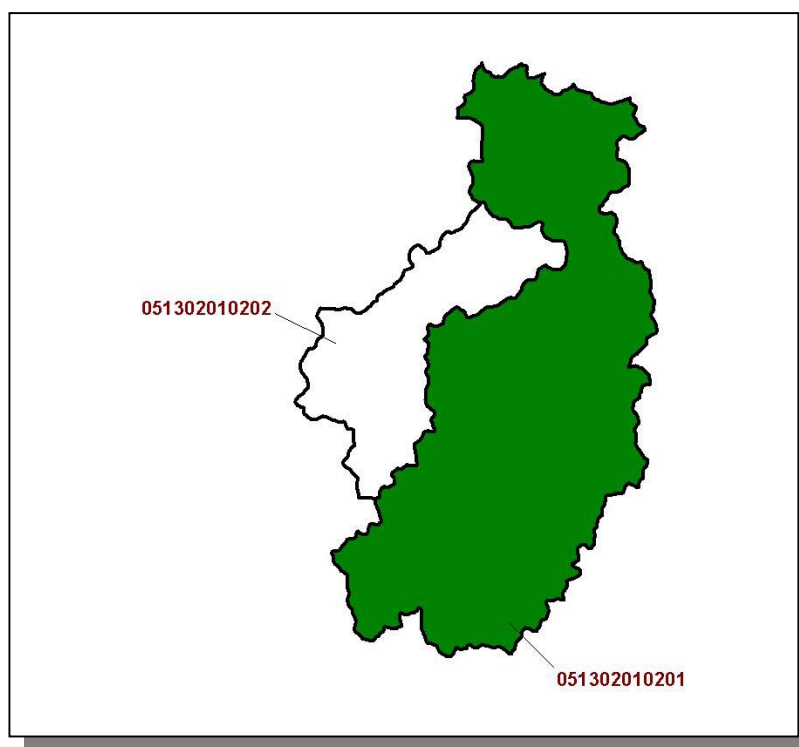
**4.2.B. 0513020102.**



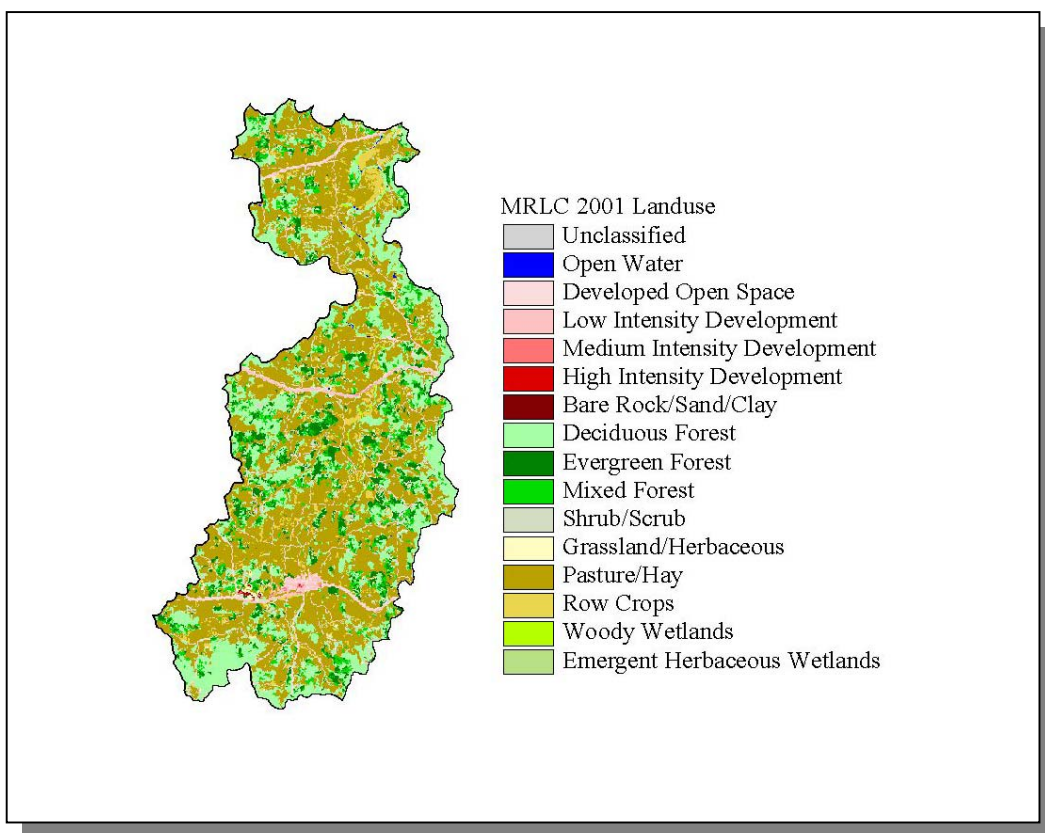
**Figure 4-60. Location of Subwatershed 0513020102.** All Old Hickory Lake HUC-10 subwatershed boundaries are shown for reference.



**4.2.B.i. 051302010201 (Round Lick Creek).**

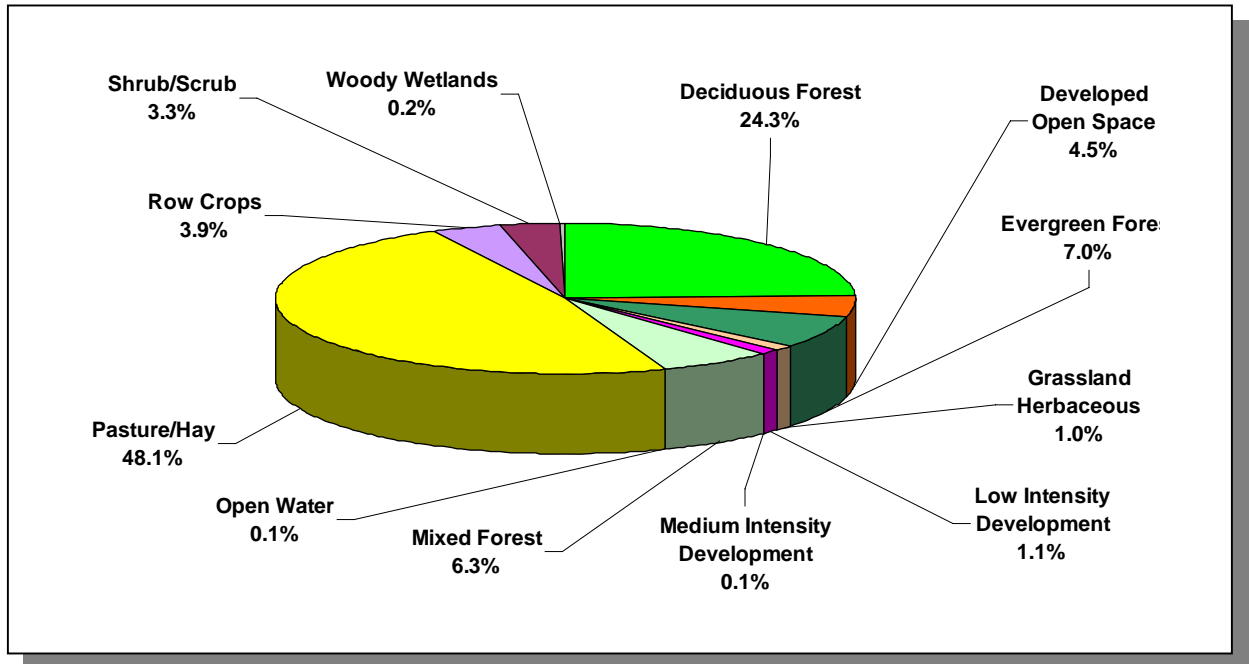


**Figure 4-61. Location of Subwatershed 051302010201.** All HUC-12 subwatershed boundaries are shown for reference.



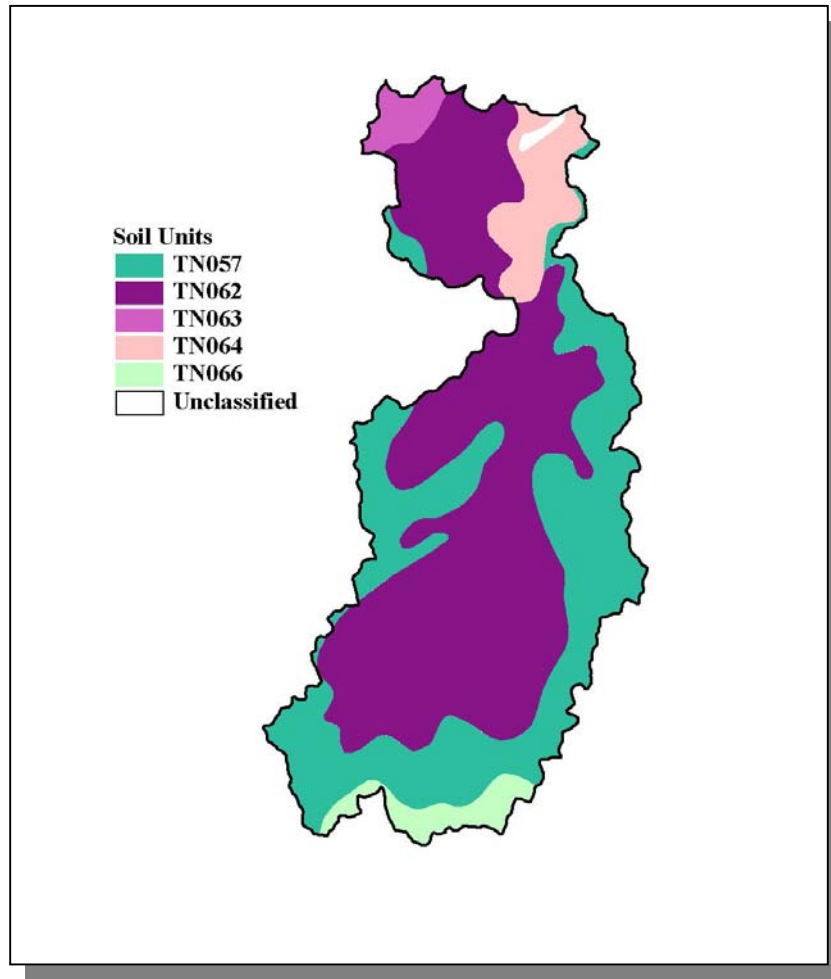
**Figure 4-62. Illustration of Land Use Distribution in Subwatershed 051302010201.**

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**Figure 4-63. Land Use Distribution in Subwatershed 051302010201.** More information is provided in Appendix IV.

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**Figure 4-64. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010201.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN062	0.00	C	0.98	4.40	Clayey Loam	0.26
TN063	0.00	C	1.19	5.72	Clayey Loam	0.32
TN064	7.00	C	1.19	5.82	Silty Loam	0.37
TN066	0.00	B	2.62	4.75	Loam	0.28

**Table 4-46. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010201.** The definition of "Hydrologic Group" is provided in Appendix IV.

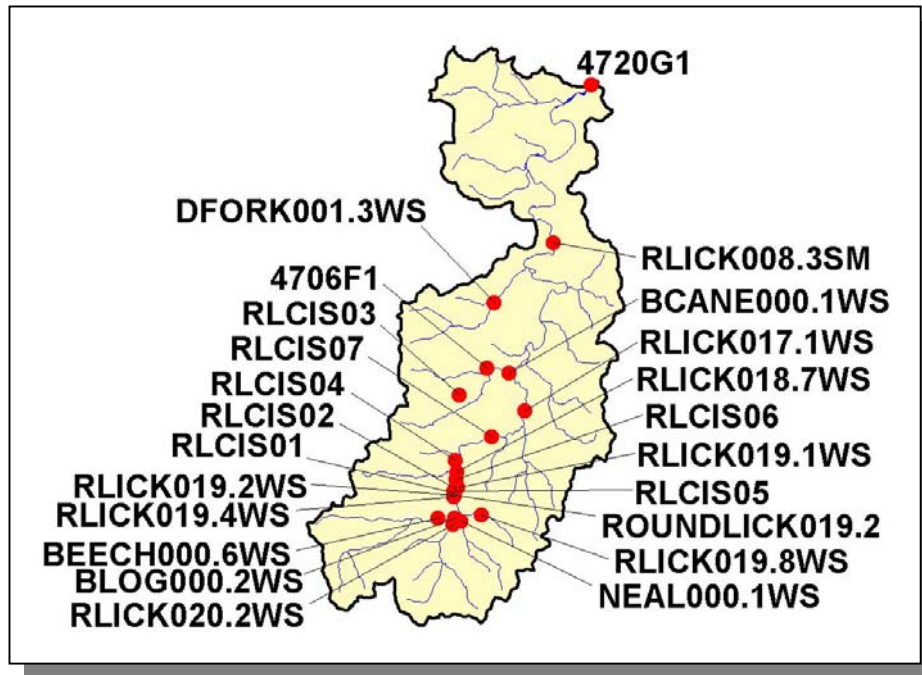
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Smith	14,143	16,047	17,712	4.96	702	797	879	25.2

*Table 4-47. Population Estimates in Subwatershed 051302010201.*

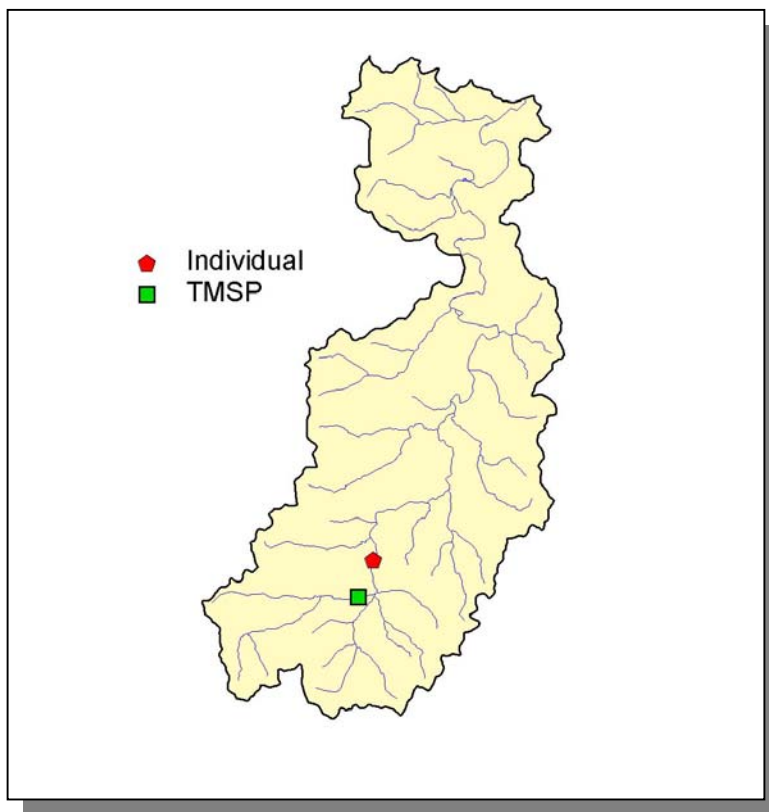
Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Watertown	Wilson	1,250	566	512	54	0

*Table 4-48. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051302010201.*

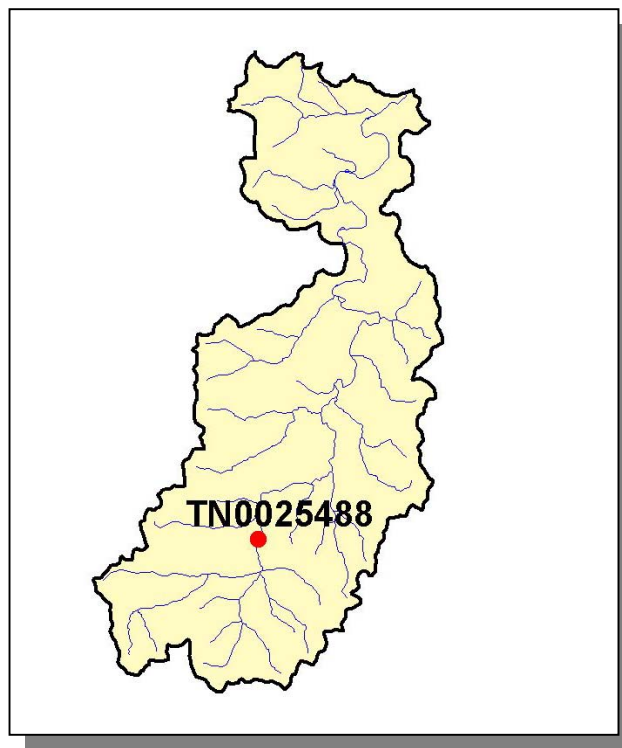


*Figure 4-65. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010201. More information, including site names and locations, is provided in Appendix IV.*

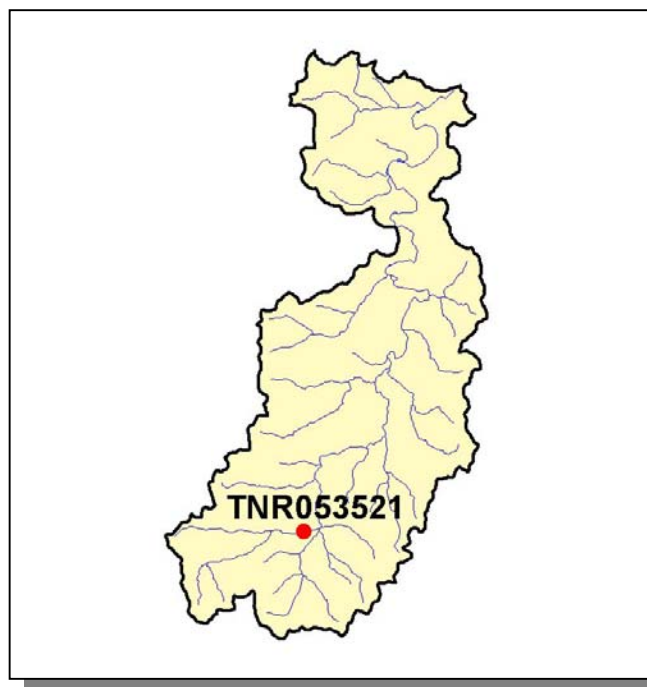
**4.2.B.i.a. Point Source Contributions.**



**Figure 4-66. Location of Permits Issued in Subwatershed 051302010201.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-67. Location of Active NPDES Sites in Subwatershed 051302010201.** More information, including the names of facilities, is provided in Appendix IV.

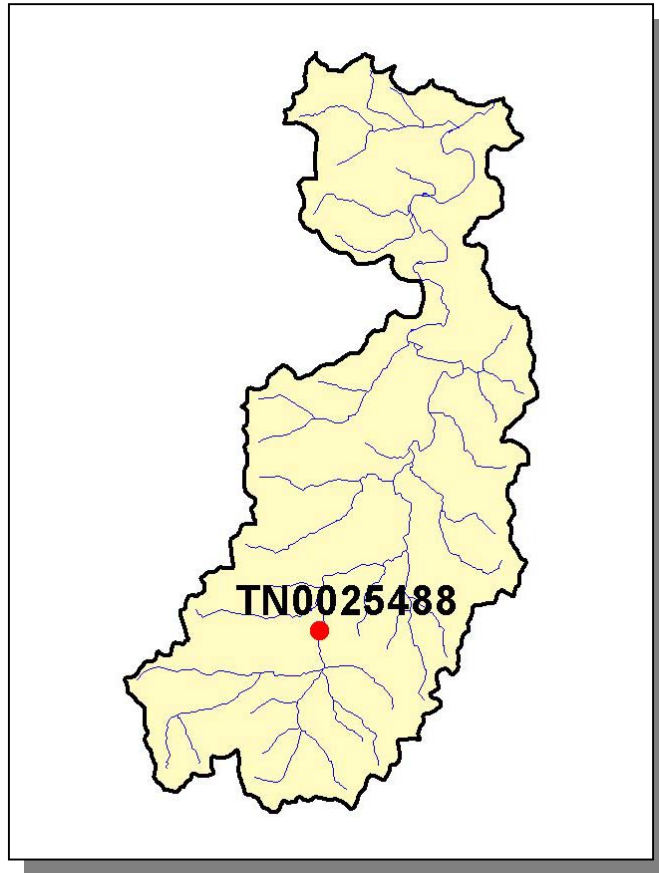


**Figure 4-68. Location of TMSP Sites in Subwatershed 051302010201.** More information, including the names of facilities, is provided in Appendix IV.

**4.2.B.i.a.i.** Dischargers to Water Bodies Listed on the 2004 303(d) List

There is one NPDES facility discharging to water bodies listed on the 2004 303(d) list in Subwatershed 051302010201:

- TN0025488 (Watertown STP) discharges to Round Lick Creek @ RM 19.2



**Figure 4-69. Location of NPDES Dischargers to Water Bodies Listed on the 2004 303(d) List in Subwatershed 051302010201.** More information, including the names of facilities, is provided in Appendix IV.



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PERMIT #	1Q10	3Q10	7Q10	3Q20	QDESIGN
TN0025488				0	

**Table 4-49. Receiving Stream Flow Information for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051302010201.** Data are in million gallons per day (MGD). Data were obtained from the USGS publication Flow Duration and Low Flows of Tennessee Streams Through 1992 or from permit files.

PERMIT #	WET	CBOD <sub>5</sub>	NH <sub>3</sub>	FECAL COLIFORM	TRC	TSS	SETTLEABLE SOLIDS	DO	pH	Ag
TN0025488	X	X	X	X	X	X	X	X	X	X

**Table 4-50. Inorganic Parameters Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051302010201.** WET, Whole Effluent Toxicity; CBOD<sub>5</sub>, Carbonaceous Biochemical Oxygen Demand (5-Day); TRC, Total Residual Chlorine; TSS, Total Suspended Solids.

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**4.2.B.i.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
3,953	7,248	210	11	301	70

**Table 4-51. Summary of Livestock Count Estimates in Subwatershed 051302010201.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Smith	17,187	29,672	814	683	1,883	332
Wilson	27,209	51,090	1,505	1,585	1,700	465

**Table 4-52. Summary of Livestock Count Estimates in Smith and Wilson Counties.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

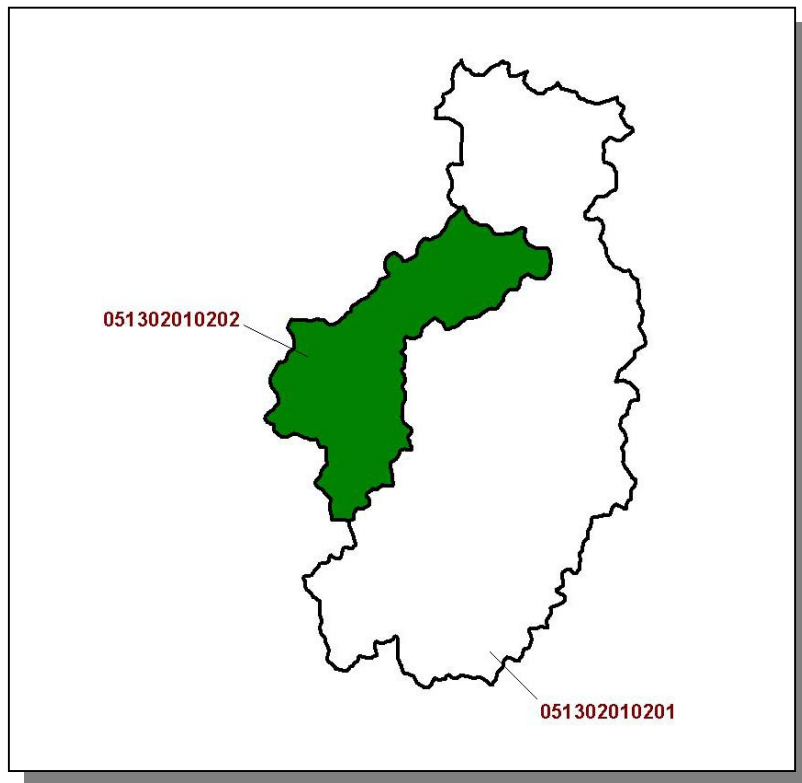
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Smith	81.0	81.0	1.1	2.6
Wilson	98.1	97.0	1.7	6.8

**Table 4-53. Forest Acreage and Annual Removal Rates (1987-1994) in Smith and Wilson Counties.**

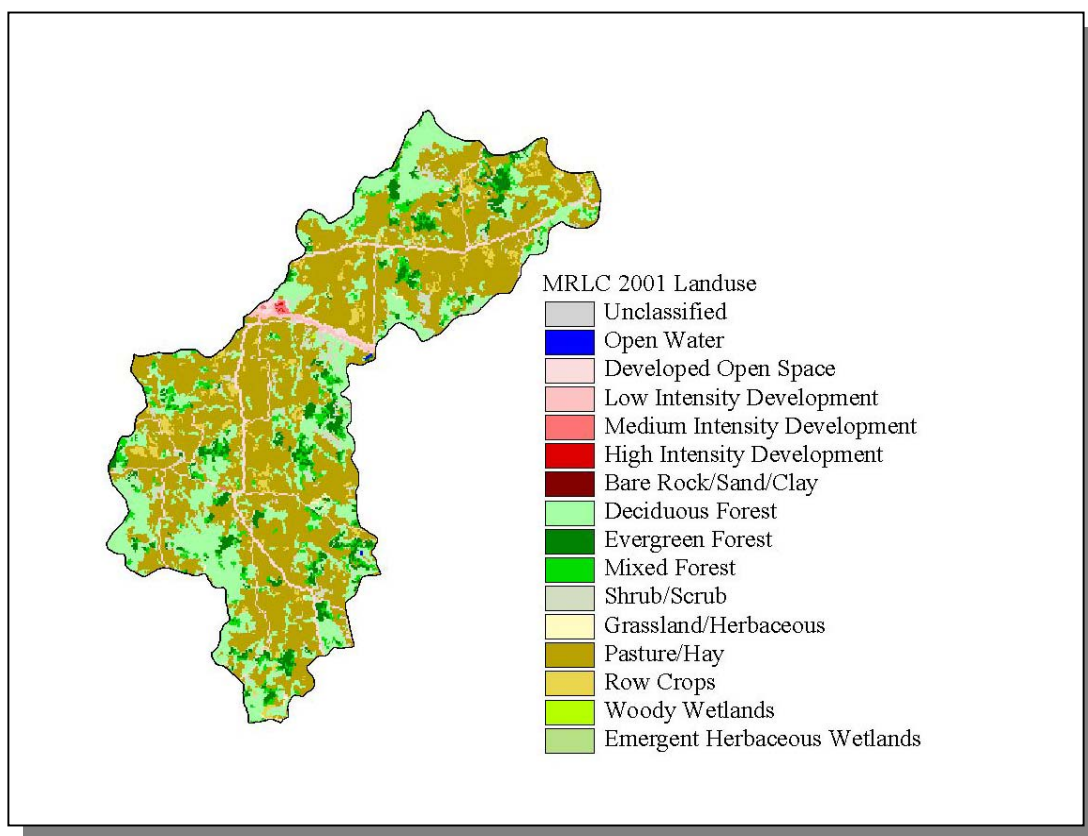
CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.67
Grass (Hayland)	0.31
Legumes, Grass (Hayland)	0.31
Grass, Forbs, Legumes (Mixed Pasture)	0.85
Corn (Row Crops)	2.22
Sorghum (Row Crops)	6.64
Tobacco (Row Crops)	16.34
Wheat (Close-Grown Cropland)	1.96
All Other Close-Grown Cropland	2.49
Farmsteads and Ranch Headquarters	0.30

**Table 4-54. Annual Estimated Total Soil Loss in Subwatershed 051302010201.**

**4.2.B.ii. 051302010202 (Jennings Fork).**

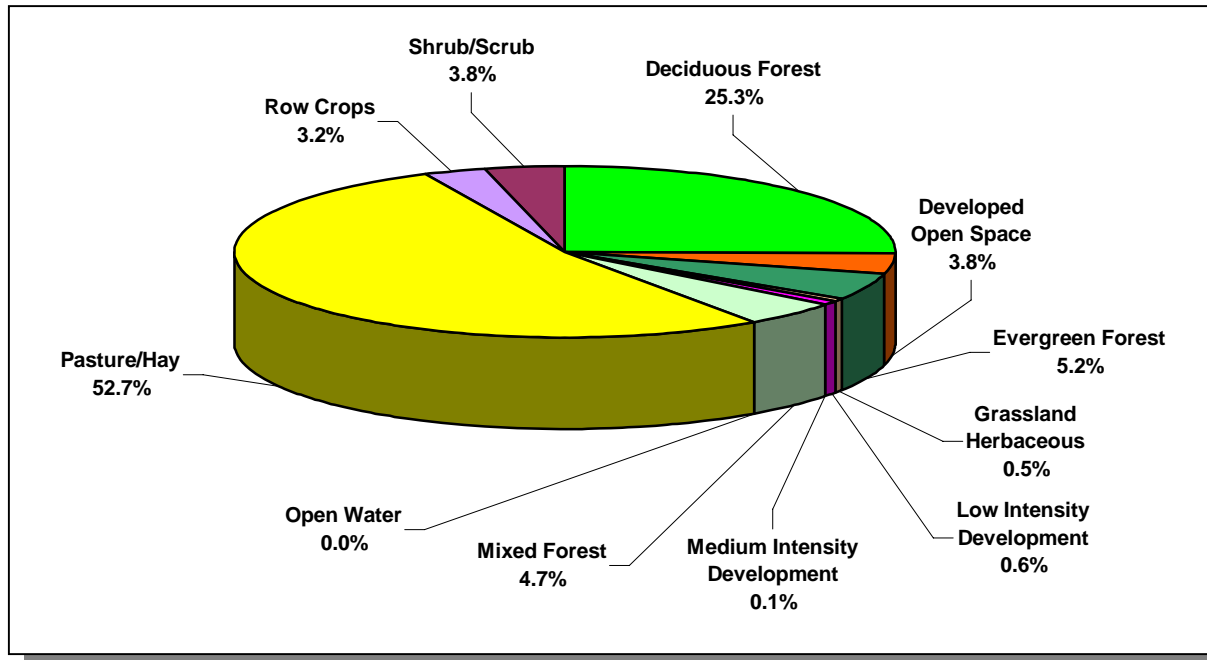


**Figure 4-70. Location of Subwatershed 051302010202.** All HUC-12 subwatershed boundaries are shown for reference.



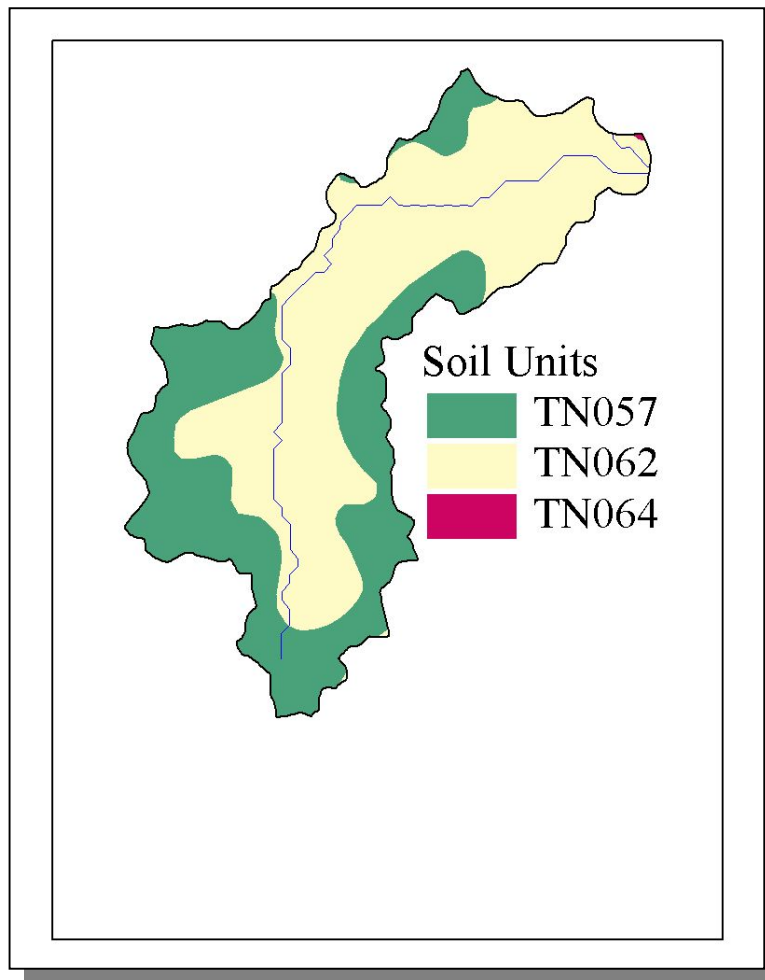
**Figure 4-71. Illustration of Land Use Distribution in Subwatershed 051302010202.**

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**Figure 4-72. Land Use Distribution in Subwatershed 051302010202.** More information is provided in Appendix IV.

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**Figure 4-73. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010202.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN062	0.00	C	0.98	4.40	Clayey Loam	0.26
TN064	7.00	C	1.19	5.82	Silty Loam	0.37

**Table 4-55. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010202.** The definition of "Hydrologic Group" is provided in Appendix IV.

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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Smith	14,143	16,047	17,712	0.02	3	4	4	33.3

**Table 4-56. Population Estimates in Subwatershed 051302010202.**



**Figure 4-74. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010202.** More information, including site names and locations, is provided in Appendix IV.

**4.2.B.ii.a. Point Source Contributions.**

There are no point source contributions in this subwatershed.

**4.2.B.ii.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
1,290	2,421	71	<5	81	22

**Table 4-57. Summary of Livestock Count Estimates in Subwatershed 051302010202.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Smith	17,187	29,672	814	683	1,883	332
Wilson	27,209	51,090	1,505	1,585	1,700	465

**Table 4-58. Summary of Livestock Count Estimates in Smith and Wilson Counties.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Smith	81.0	81.0	1.1	2.6
Wilson	98.1	97.0	1.7	6.8

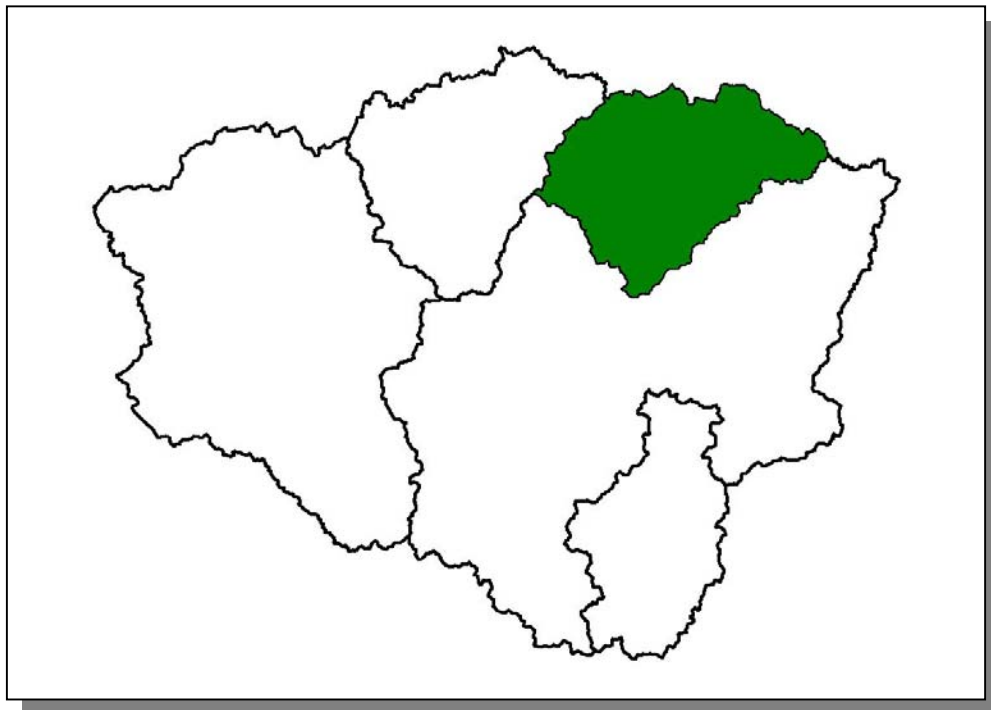
**Table 4-59. Forest Acreage and Annual Removal Rates (1987-1994) in Smith and Wilson Counties.**

CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.43
Grass (Hayland)	0.37
Legumes, Grass (Hayland)	0.37
Grass, Forbs, Legumes (Mixed Pasture)	0.91
Corn (Row Crops)	2.22
Soybeans (Row Crops)	6.72
Tobacco (Row Crops)	19.18
Wheat (Close-Grown Cropland)	1.96
All Other Close-Grown Cropland	2.49
Farmsteads and Ranch Headquarters	0.26

**Table 4-60. Annual Estimated Total Soil Loss in Subwatershed 051302010202.**

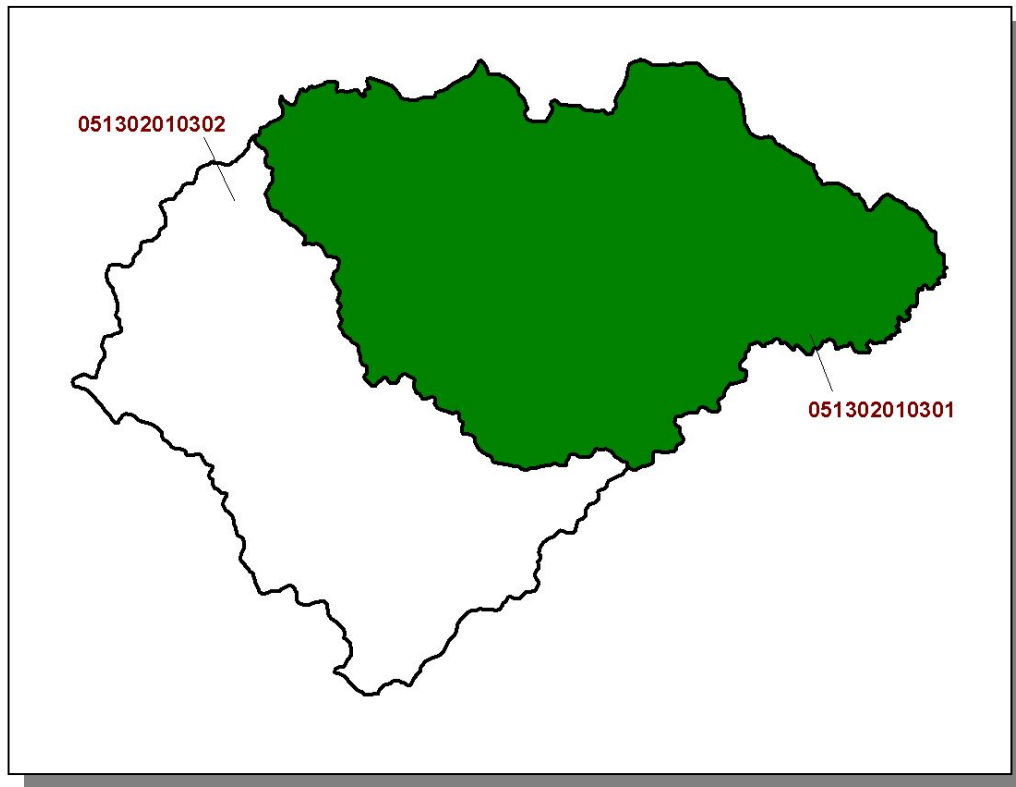


**4.2.C. 0513020103.**

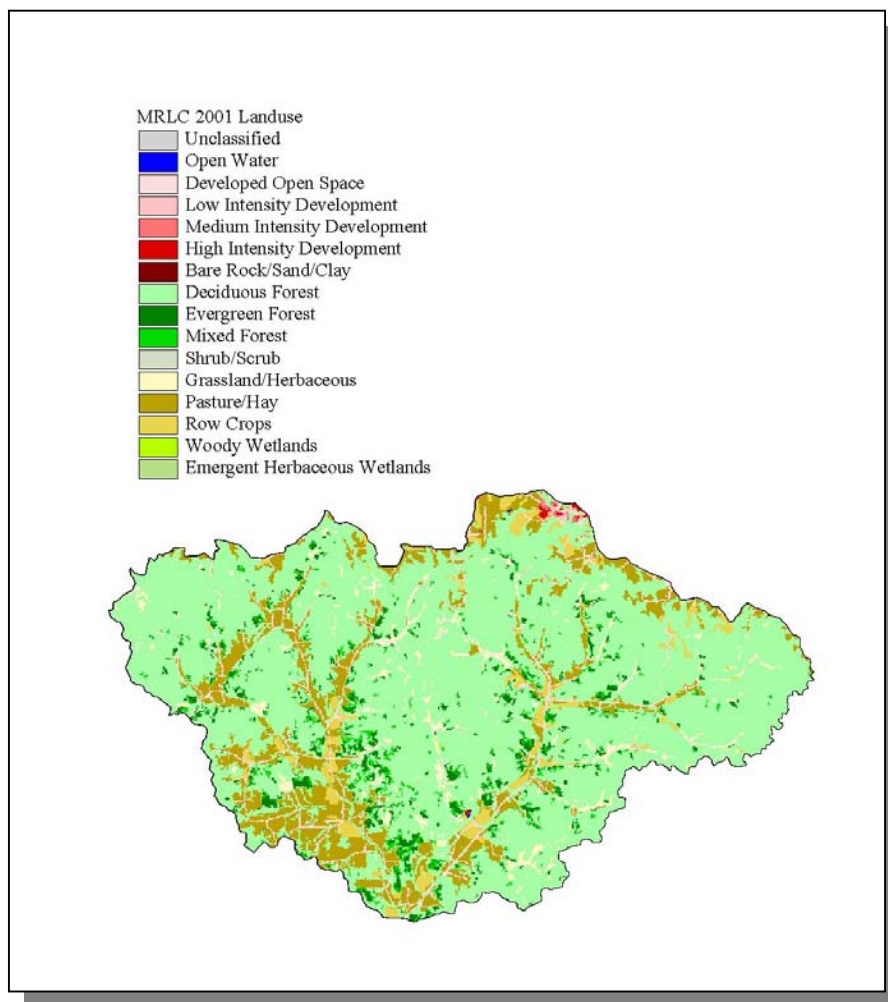


**Figure 4-75. Location of Subwatershed 0513020103.** All Old Hickory Lake HUC-10 subwatershed boundaries are shown for reference.

**4.2.C.i. 051302010301 (Upper Goose Creek).**

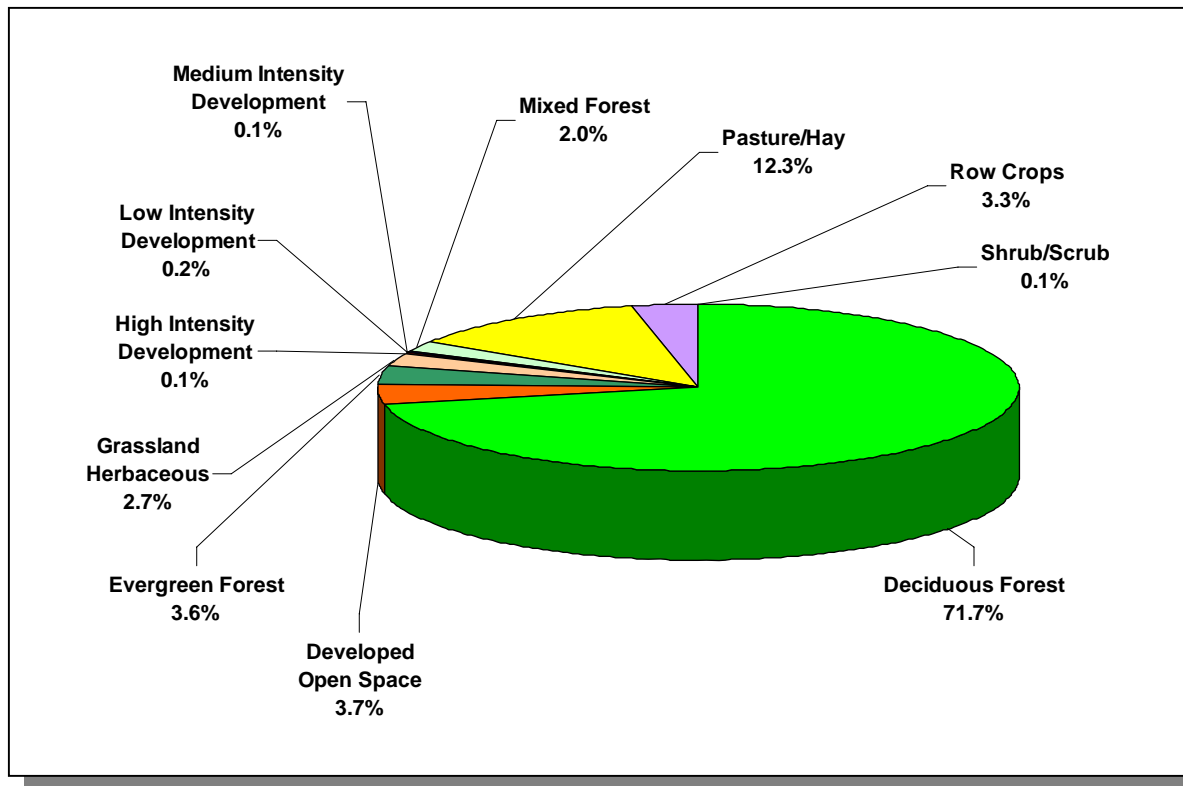


**Figure 4-76. Location of Subwatershed 051302010301.** All HUC-12 subwatershed boundaries are shown for reference.



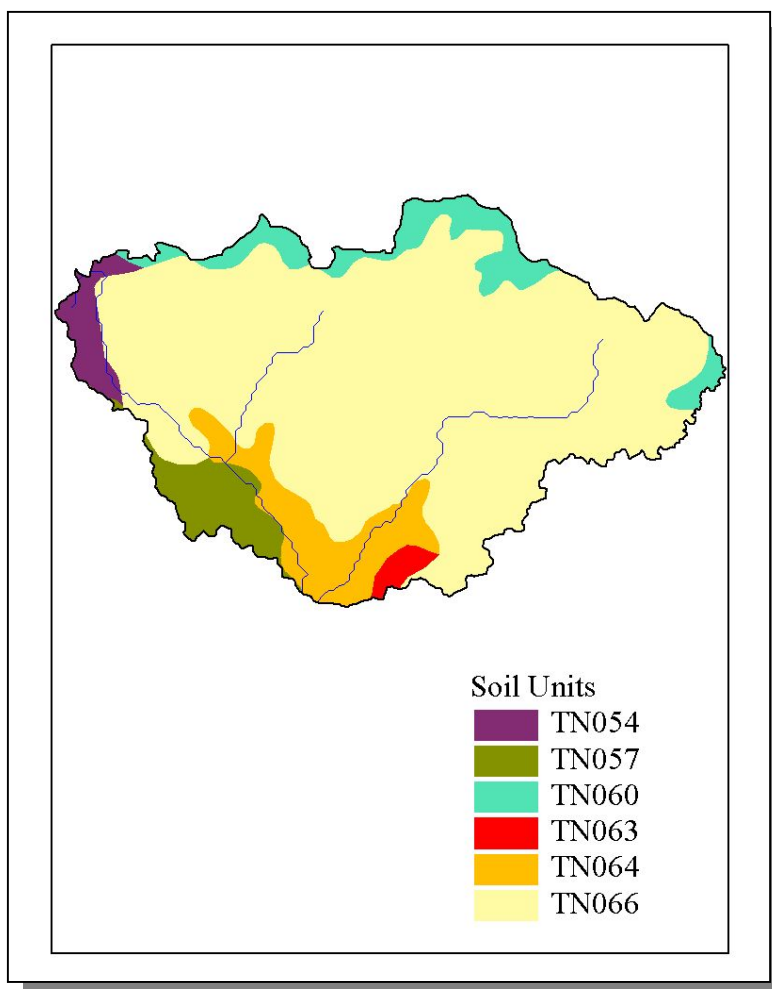
**Figure 4-77. Illustration of Land Use Distribution in Subwatershed 051302010301.**

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*Figure 4-78. Land Use Distribution in Subwatershed 051302010301. More information is provided in Appendix IV.*

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**Figure 4-79. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010301.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN054	0.00	C	3.04	4.84	Loam	0.32
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN060	5.00	B	1.30	5.32	Sity Loam	0.39
TN063	0.00	C	1.19	5.72	Clayey Loam	0.32
TN064	7.00	C	1.19	5.82	Silty Loam	0.37
TN066	0.00	B	2.62	4.75	Loam	0.28

**Table 4-61. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010301.** The definition of "Hydrologic Group" is provided in Appendix IV.

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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Macon	15,906	17,854	20,386	18.09	2,878	3,230	3,689	28.2
Trousdale	5,920	6,748	7,259	5.06	300	342	368	22.7
<b>Total</b>	<b>21,826</b>	<b>24,602</b>	<b>27,645</b>		<b>3,178</b>	<b>3,572</b>	<b>4,057</b>	<b>27.7</b>

*Table 4-62. Population Estimates in Subwatershed 051302010301.*

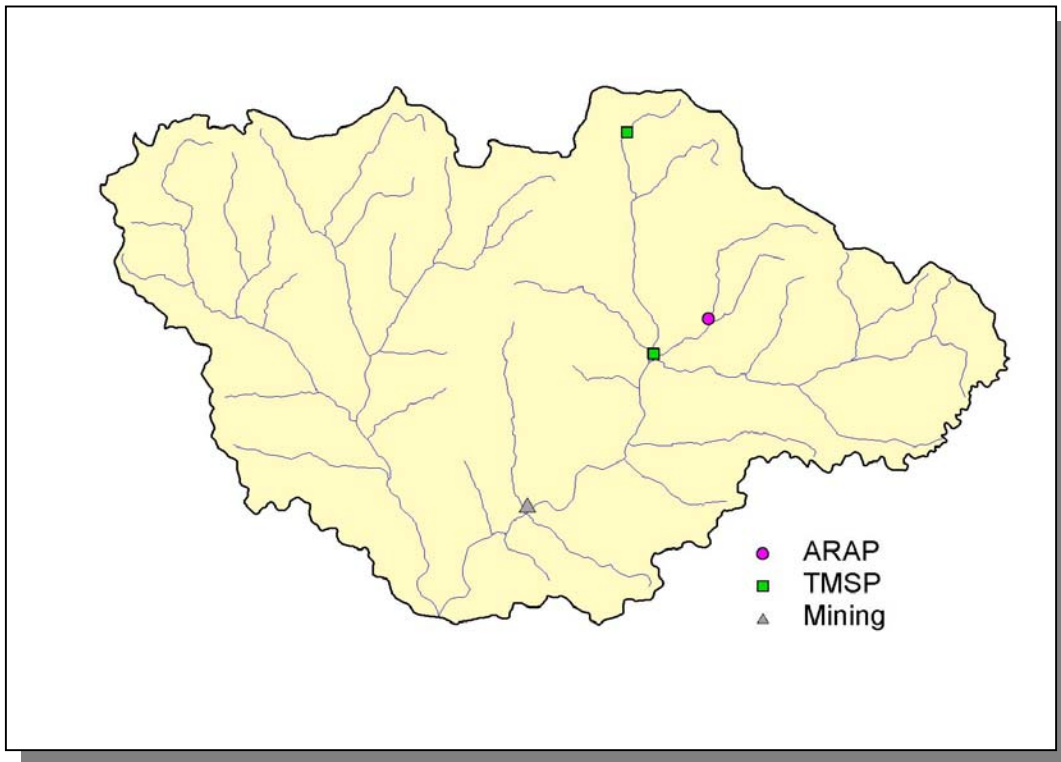
			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Lafayette	Macon	3,641	1,695	1,323	348	24

*Table 4-63. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051302010301.*



*Figure 4-80. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010301. More information, including site names and locations, is provided in Appendix IV.*

**4.2.C.i.a. Point Source Contributions.**



**Figure 4-81. Location of Permits Issued in Subwatershed 051302010301.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-82. Location of Active Mining Sites in Subwatershed 051302010301.** More information, including the names of mining operations, is provided in Appendix IV.



**Figure 4-83. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 051302010301.** More information is provided in Appendix IV.





**Figure 4-84. Location of TMSP Sites in Subwatershed 051302010301.** More information, including the names of facilities, is provided in Appendix IV.

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**4.2.C.i.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
2,450	4,240	52	5	340	25

**Table 4-64. Summary of Livestock Count Estimates in Subwatershed 051302010301.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Macon	15,039	26,098	318	675	2,377	111
Trousdale	6,672	11,344	135	243	112	195

**Table 4-65. Summary of Livestock Count Estimates in Macon and Trousdale Counties.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

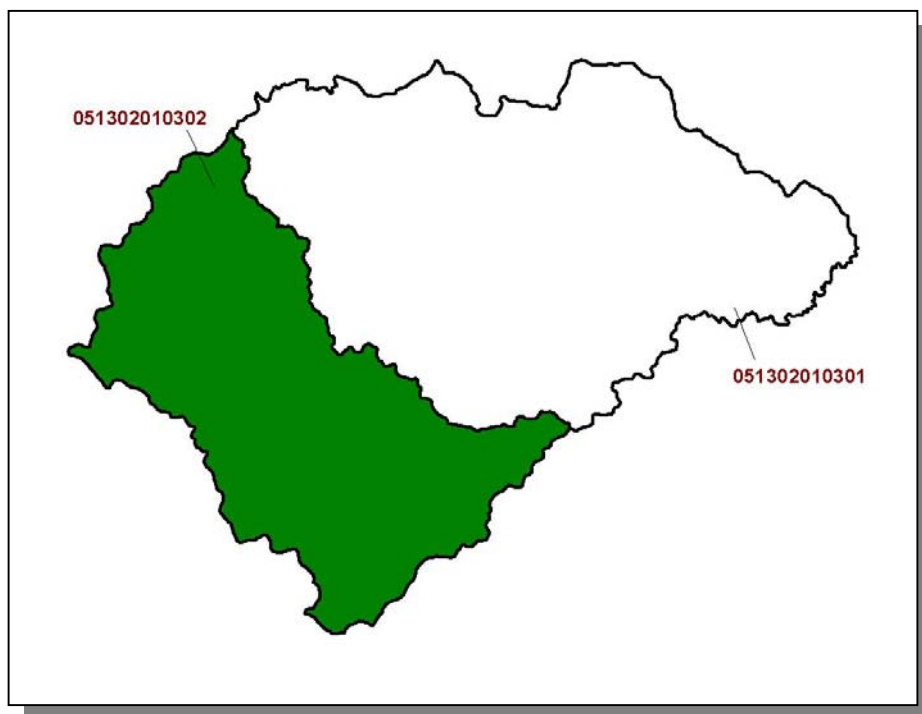
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Macon				
Trousdale	30.0	30.0	0.1	0.4

**Table 4-66. Forest Acreage and Annual Removal Rates (1987-1994) in Macon and Trousdale Counties.**

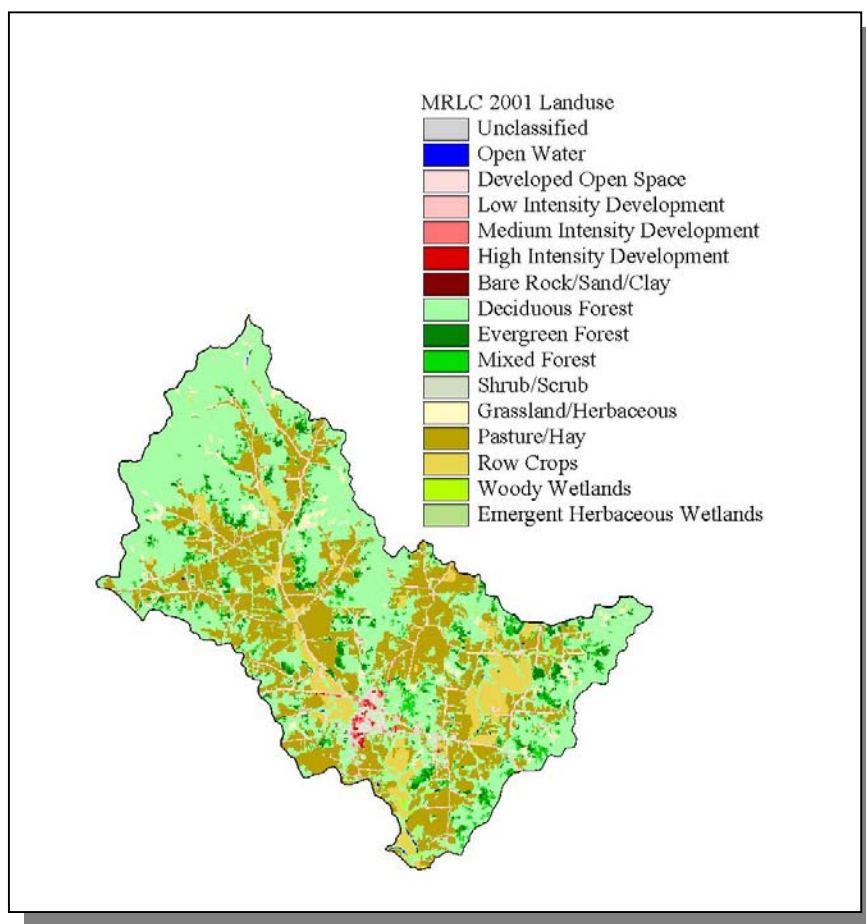
CROPS	TONS/ACRE/YEAR
Legumes (Pasture)	0.10
Grass (Pastureland)	0.43
Grass (Hayland)	0.20
Legumes, Grass (Hayland)	0.16
Legumes (Hayland)	0.13
Grass, Forbs, Legumes (Mixed Pasture)	0.97
Corn (Row Crops)	3.99
Tobacco (Row Crops)	10.68
Wheat (Close-Grown Cropland)	3.43
Other Vegetable and Truck Crops	5.48
Conservation Reserve Program Lands	0.28
Farmsteads and Ranch Headquarters	0.16

**Table 4-67. Annual Estimated Total Soil Loss in Subwatershed 051302010301.**

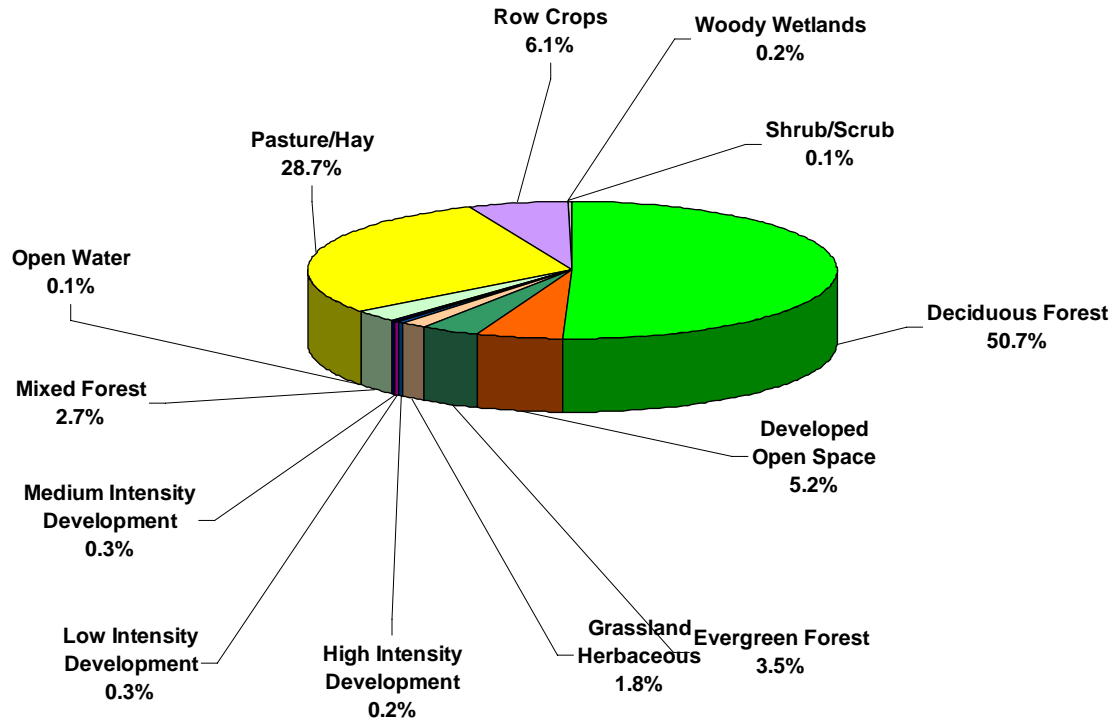
**4.2.C.ii.** 051302010302 (Lower Goose Creek).



**Figure 4-85. Location of Subwatershed 051302010302.** All HUC-12 subwatershed boundaries are shown for reference.

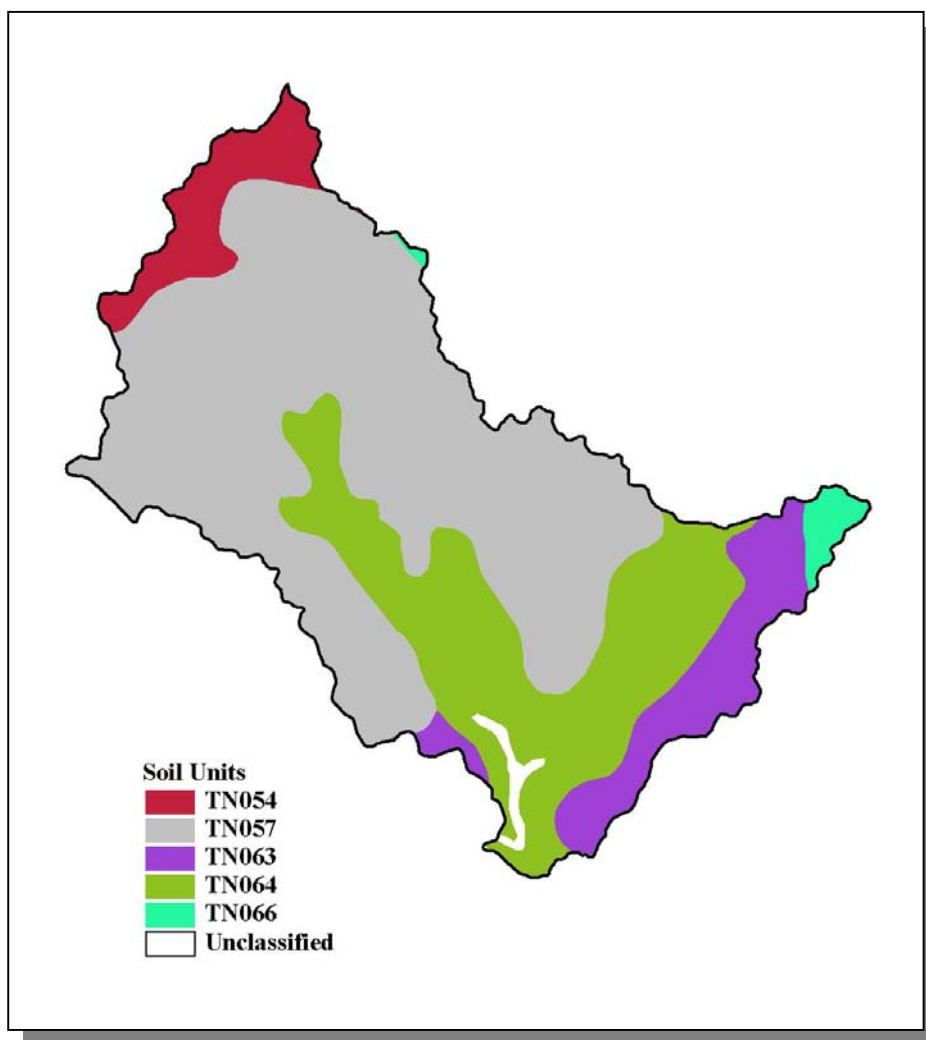


**Figure 4-86. Illustration of Land Use Distribution in Subwatershed 051302010302.**



**Figure 4-87. Land Use Distribution in Subwatershed 051302010302.** More information is provided in Appendix IV.

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**Figure 4-88. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010302.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN054	0.00	C	3.04	4.84	Loam	0.32
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN063	0.00	C	1.19	5.72	Clayey Loam	0.32
TN064	7.00	C	1.19	5.82	Silty Loam	0.37
TN066	0.00	B	2.62	4.75	Loam	0.28

**Table 4-68. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010302.** The definition of "Hydrologic Group" is provided in Appendix IV.

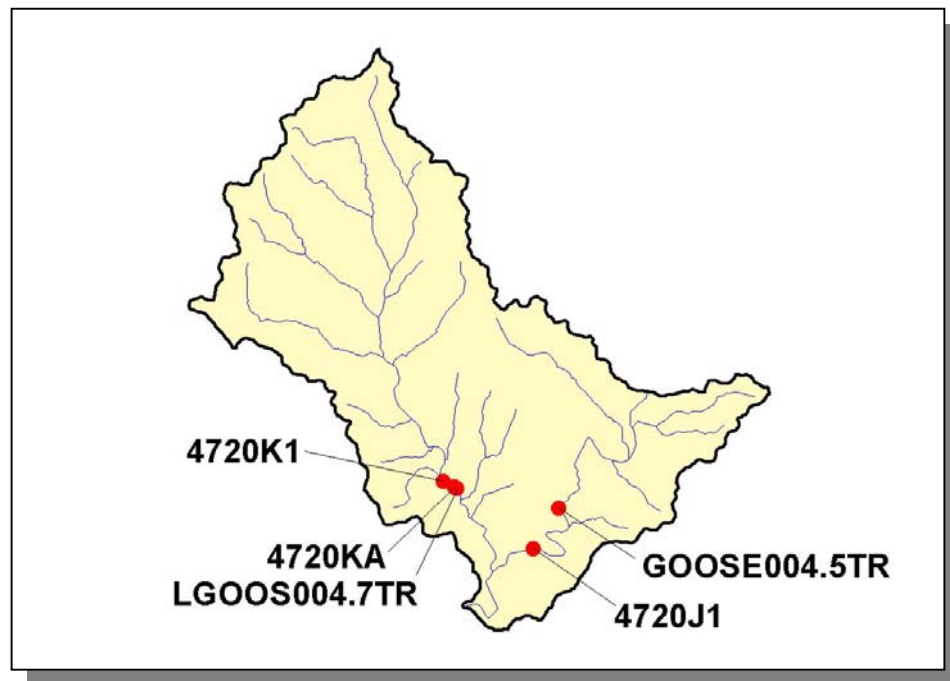
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Macon	15,906	17,854	20,386	0.87	138	154	176	27.5
Sumner	103,281	121,936	130,449	0.07	71	84	90	26.8
Trousdale	5,920	6,748	7,259	34.64	2,051	2,338	2,515	22.6
<b>Total</b>	<b>125,107</b>	<b>146,538</b>	<b>158,094</b>		<b>2,260</b>	<b>2,576</b>	<b>2,781</b>	<b>23.1</b>

*Table 4-69. Population Estimates in Subwatershed 051302010302.*

Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Hartsville	Trousdale	2,188	964	907	57	0

*Table 4-70. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051302010302.*



*Figure 4-89. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010302. More information, including site names and locations, is provided in Appendix IV.*

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**4.2.C.ii.a. Point Source Contributions.**

There are no point source contributions in this subwatershed.

**4.2.C.ii.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
2,699	4,592	55	<5	55	77

**Table 4-71. Summary of Livestock Count Estimates in Subwatershed 051302010302.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Macon	15,039	26,098	318	675	2,377	111
Sumner	22,296	45,116	1,515	50	2,500	189
Trousdale	6,672	11,344	135	243	112	195

**Table 4-72. Summary of Livestock Count Estimates in Macon, Sumner, and Trousdale Counties.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Macon				
Sumner	88.2	88.2	2.0	6.3
Trousdale	30.0	30.0	0.1	0.4

**Table 4-73. Forest Acreage and Annual Removal Rates (1987-1994) in Macon, Sumner, and Trousdale Counties.**

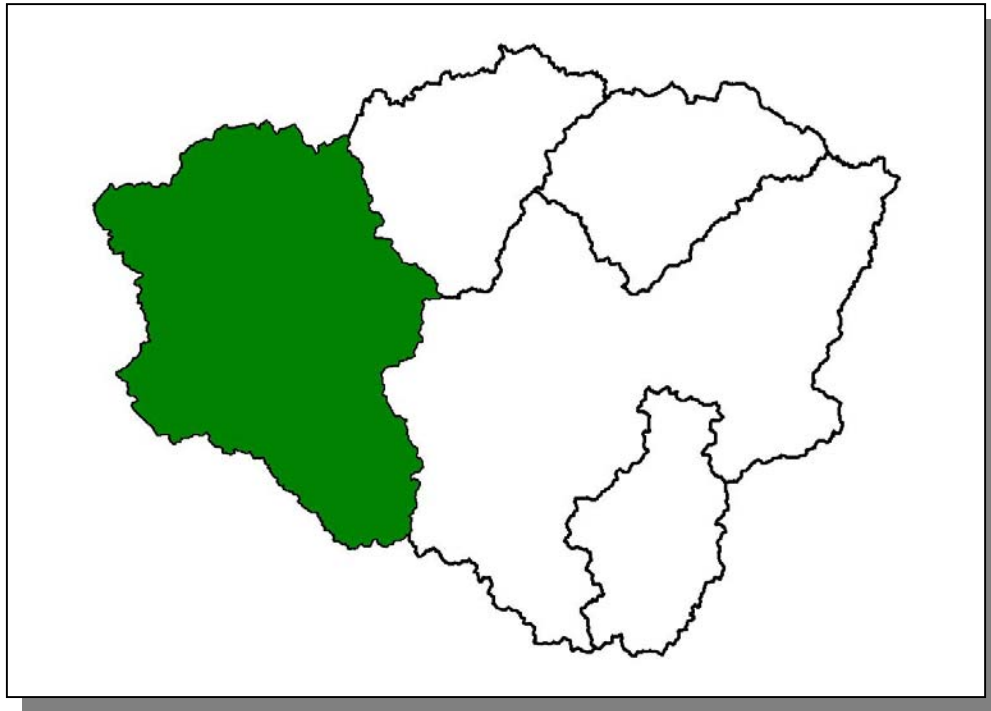


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<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Legumes ((pastureland)	0.41
Grass (Pastureland)	0.46
Grass (Hayland)	0.10
Legumes, Grass (Hayland)	0.34
Legumes (Hayland)	0.13
Grass, Forbs, Legumes (Mixed Pasture)	0.43
Corn (Row Crops)	5.01
Soybeans (Row Crops)	11.27
Wheat (Close-Grown Cropland)	3.43
Tobacco (Row Crops)	6.77
Other Vegetable and Truck Crops	5.48
Other Cropland not Planted	19.23
Conservation Reserve Program Lands	0.28
Farmsteads and Ranch Headquarters	0.21

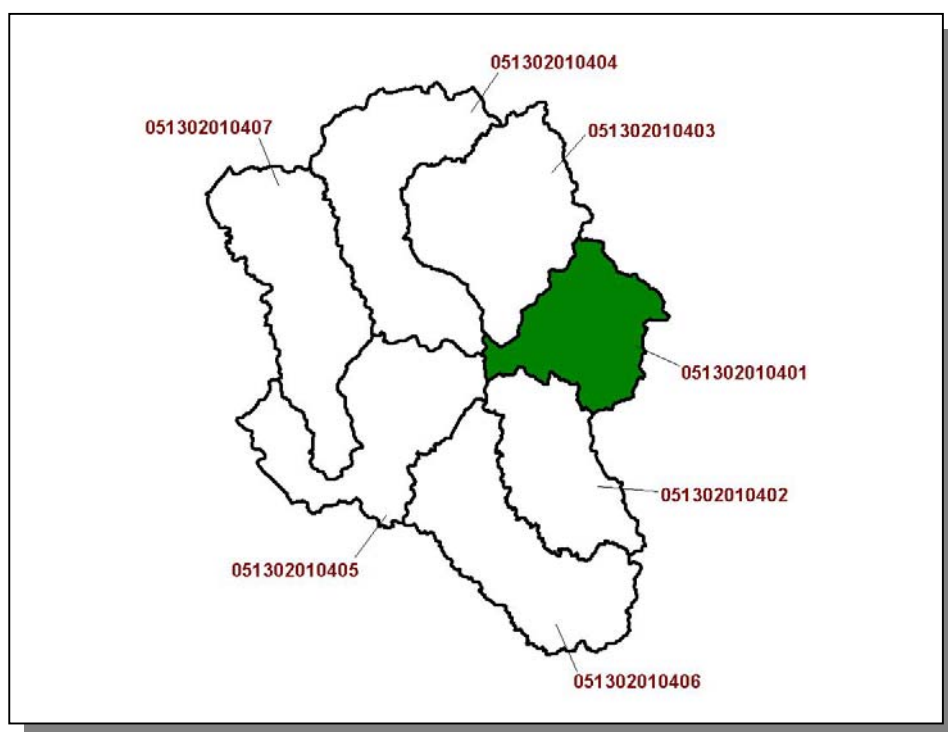
**Table 4-74. Annual Estimated Total Soil Loss in Subwatershed 051302010302.**

**4.2.D. 0513020104.**

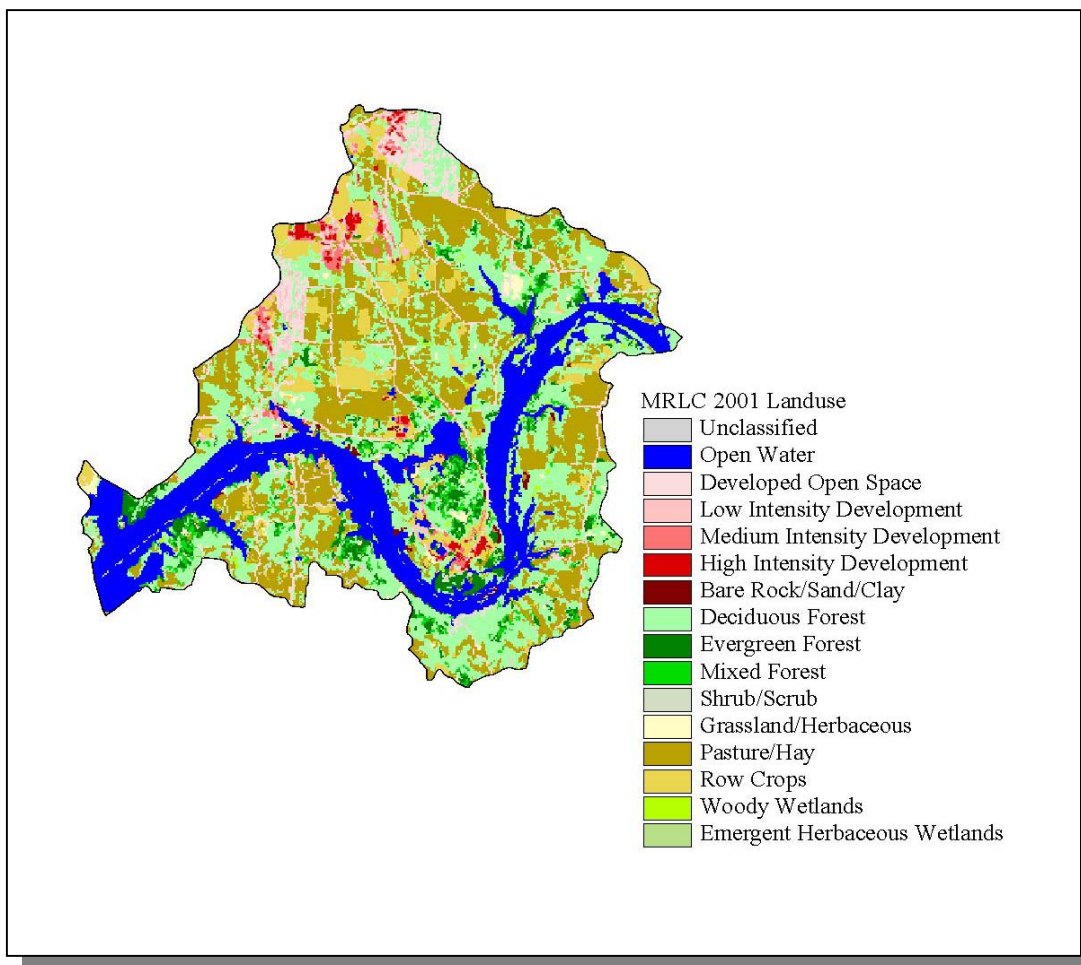


**Figure 4-90. Location of Subwatershed 0513020104.** All Old Hickory Lake HUC-10 subwatershed boundaries are shown for reference.

**4.2.D.i. 051302010401 (Cumberland River).**

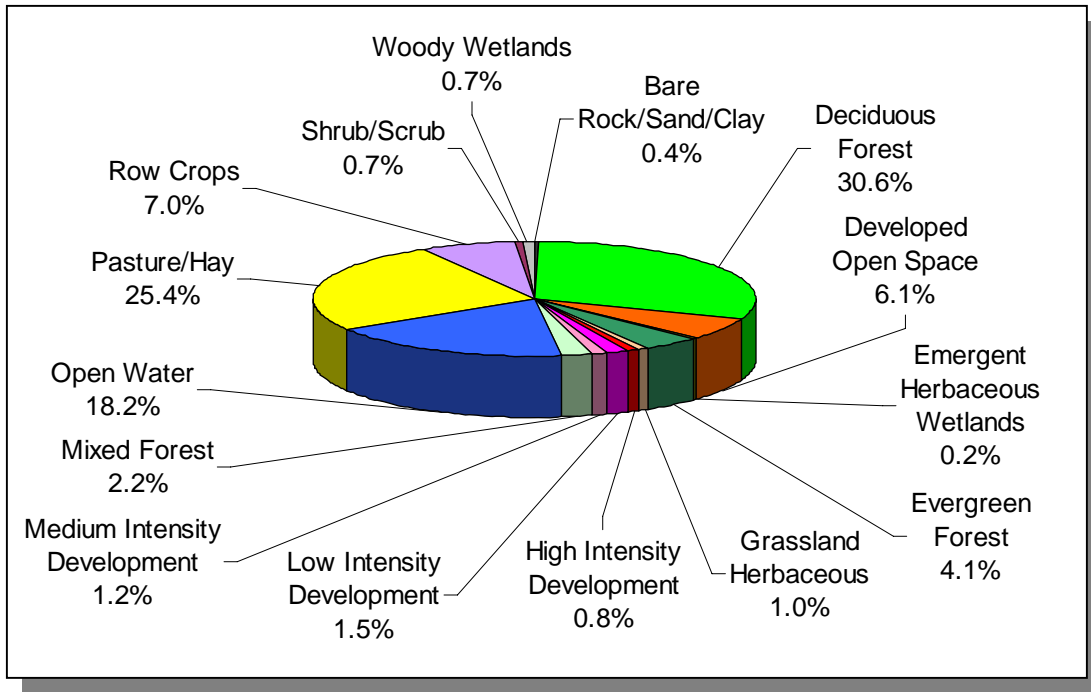


**Figure 4-91. Location of Subwatershed 051302010401.** All HUC-12 subwatershed boundaries are shown for reference.

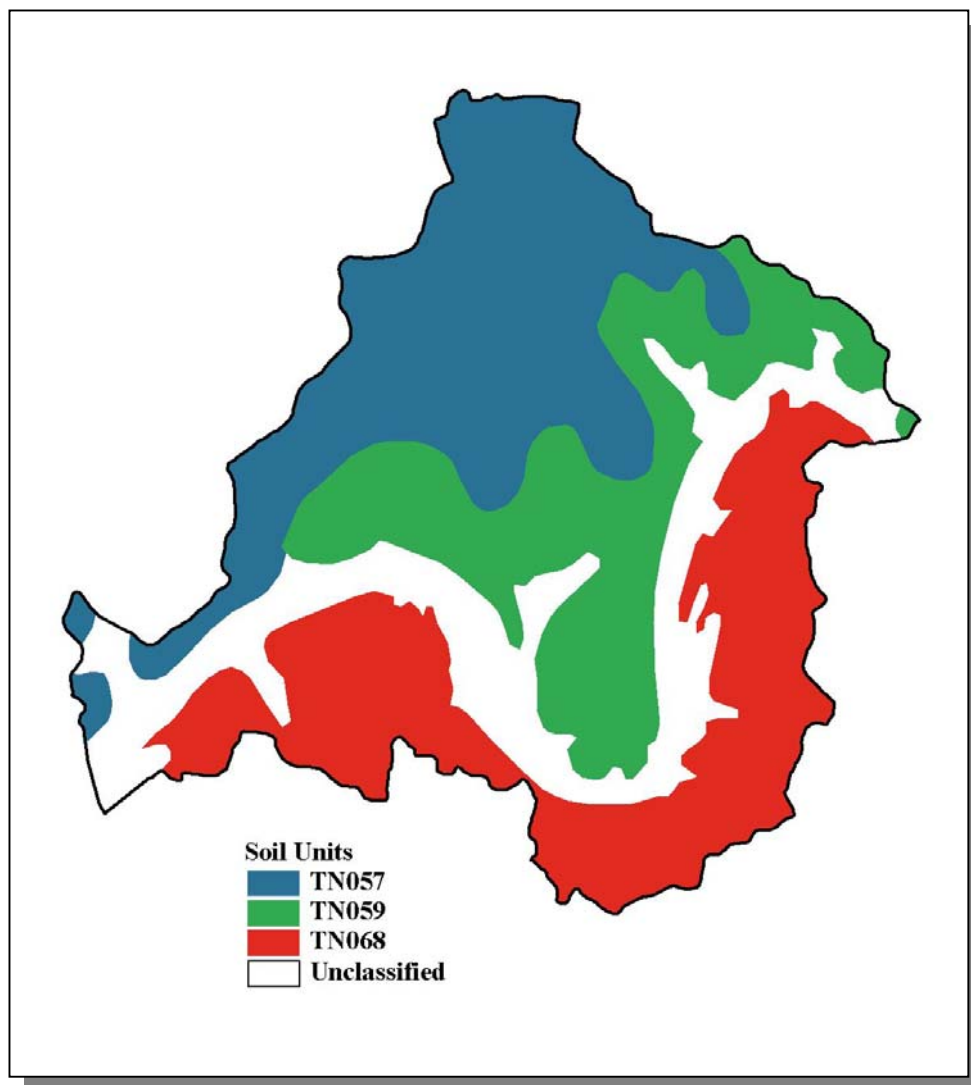


**Figure 4-92. Illustration of Land Use Distribution in Subwatershed 051302010401.**

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**Figure 4-93. Land Use Distribution in Subwatershed 051302010401.** More information is provided in Appendix IV.



**Figure 4-94. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010401.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN059	0.00	C	1.08	5.70	Silty Clayey Loam	0.35
TN068	0.00	B	1.35	5.38	Silty Loam	0.37

**Table 4-75. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010401.** The definition of “Hydrologic Group” is provided in Appendix IV.

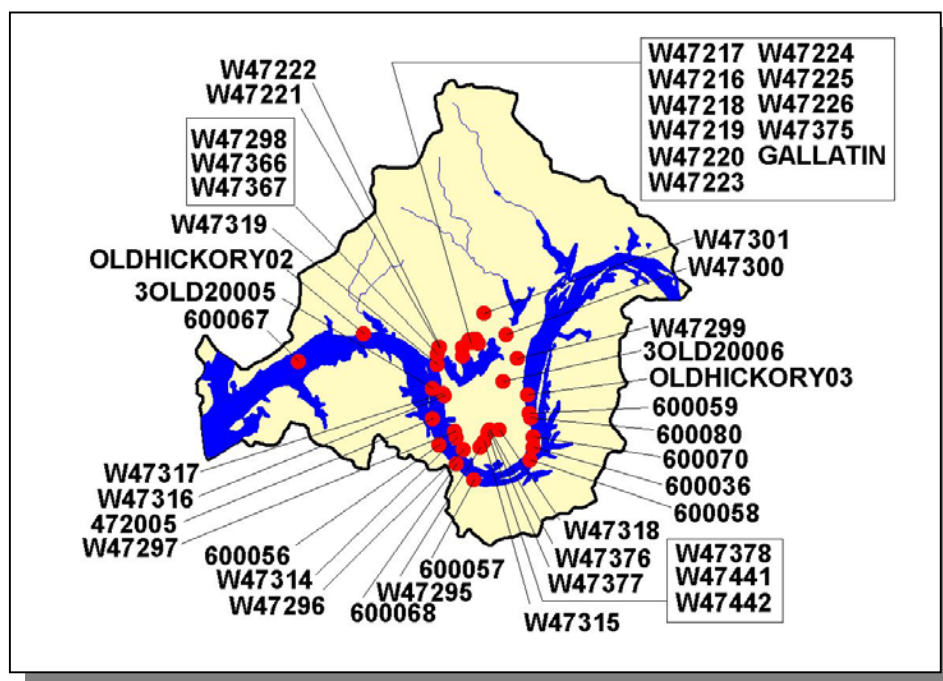
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Sumner	103,281	121,936	130,449	4.19	4,328	5,109	5,466	26.3

**Table 4-76. Population Estimates in Subwatershed 051302010401.**

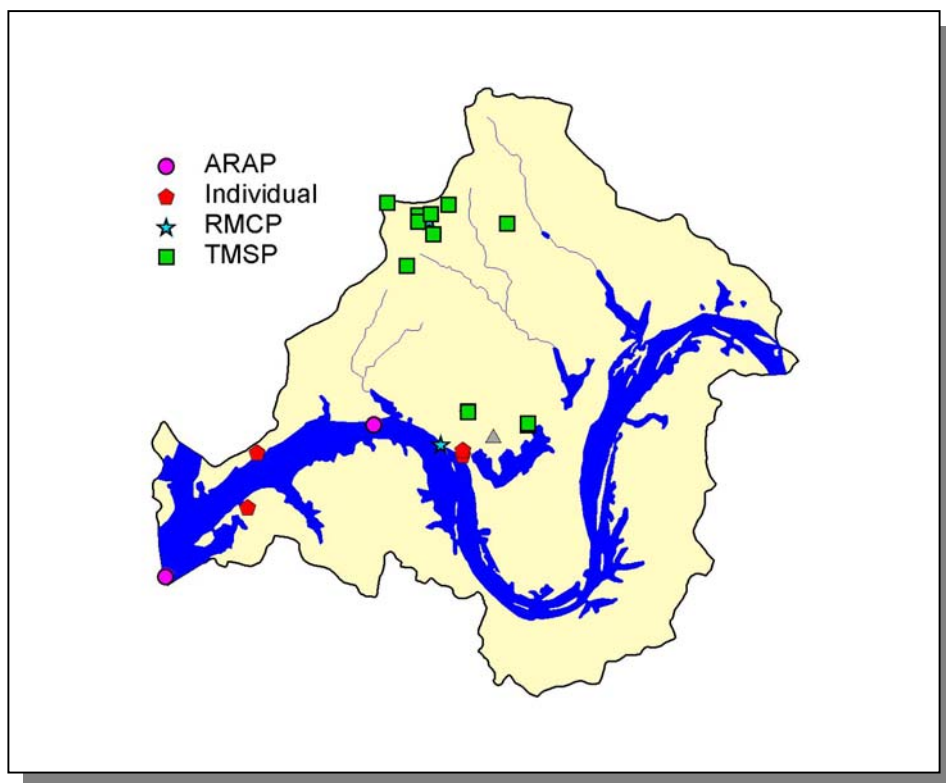
Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Gallatin	Sumner	18,794	7,635	6,931	704	0

**Table 4-77. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051302010401.**



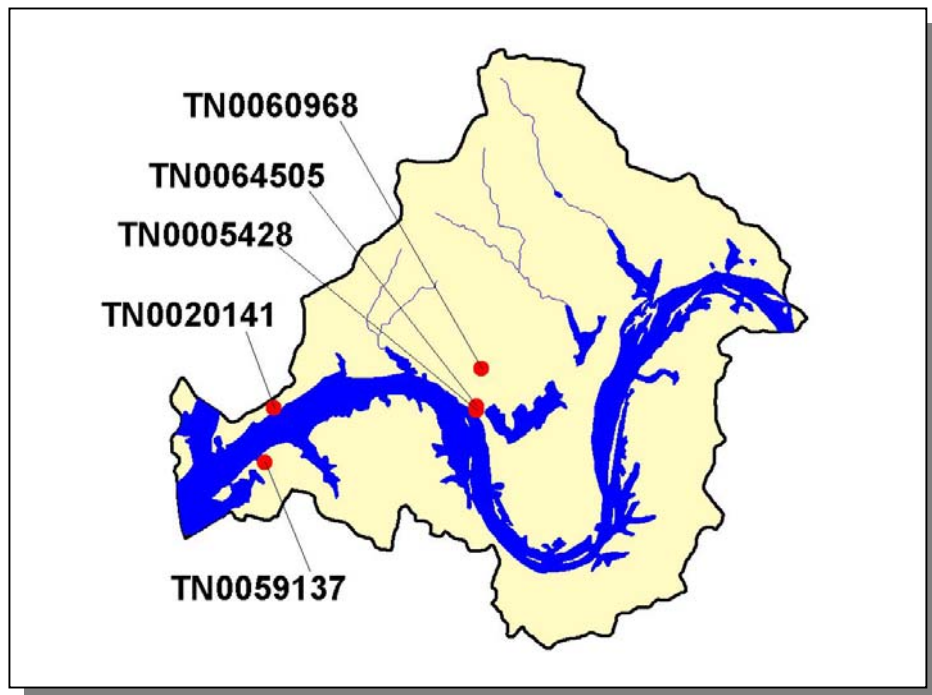
**Figure 4-95. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010401.** More information, including site names and locations, is provided in Appendix IV.

**4.2.D.i.a. Point Source Contributions.**

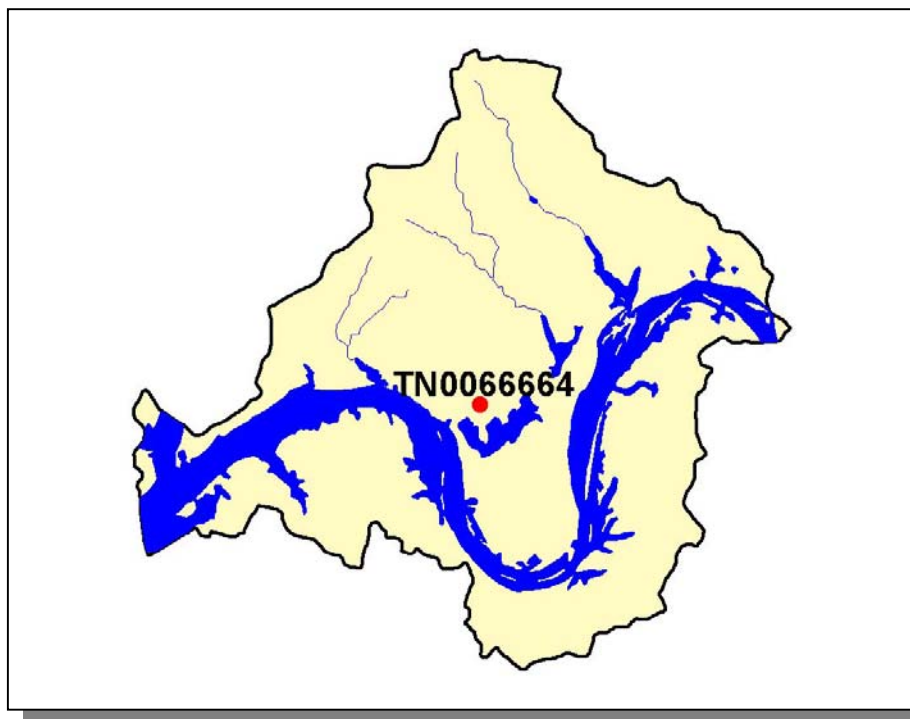


**Figure 4-96. Location of Permits Issued in Subwatershed 051302010401.** More information, including the names of facilities, is provided in Appendix IV.

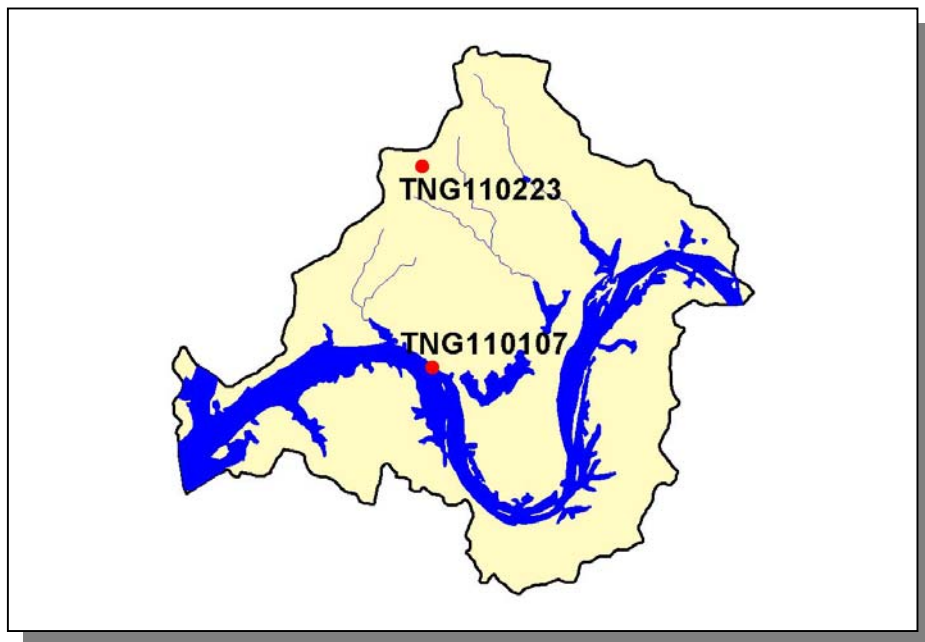




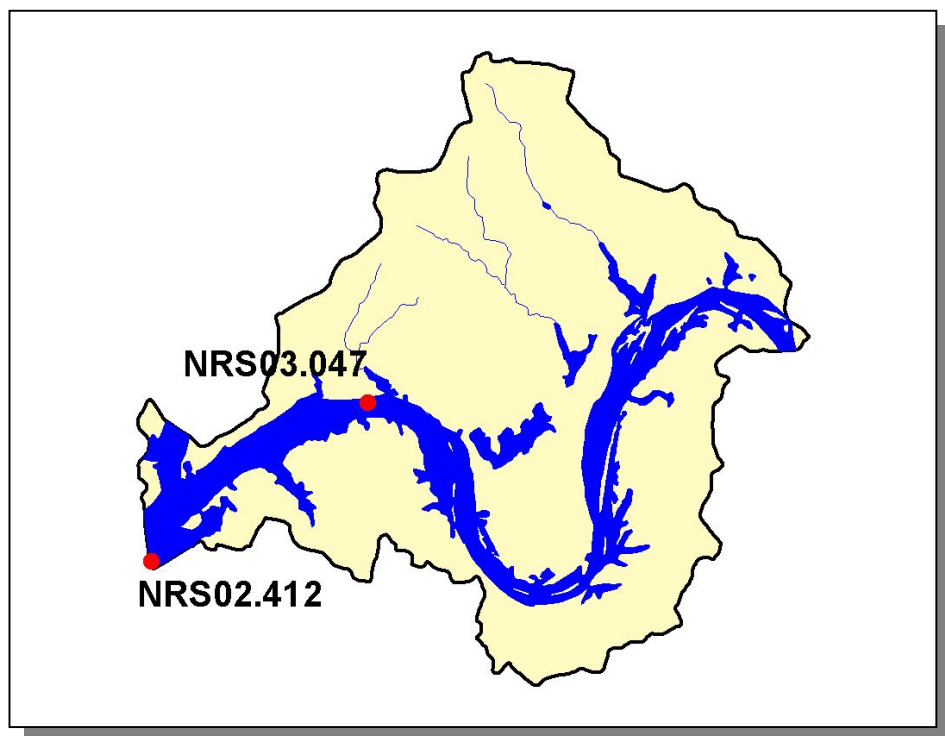
**Figure 4-97. Location of Active NPDES Sites in Subwatershed 051302010401.** More information, including the names of facilities, is provided in Appendix IV.



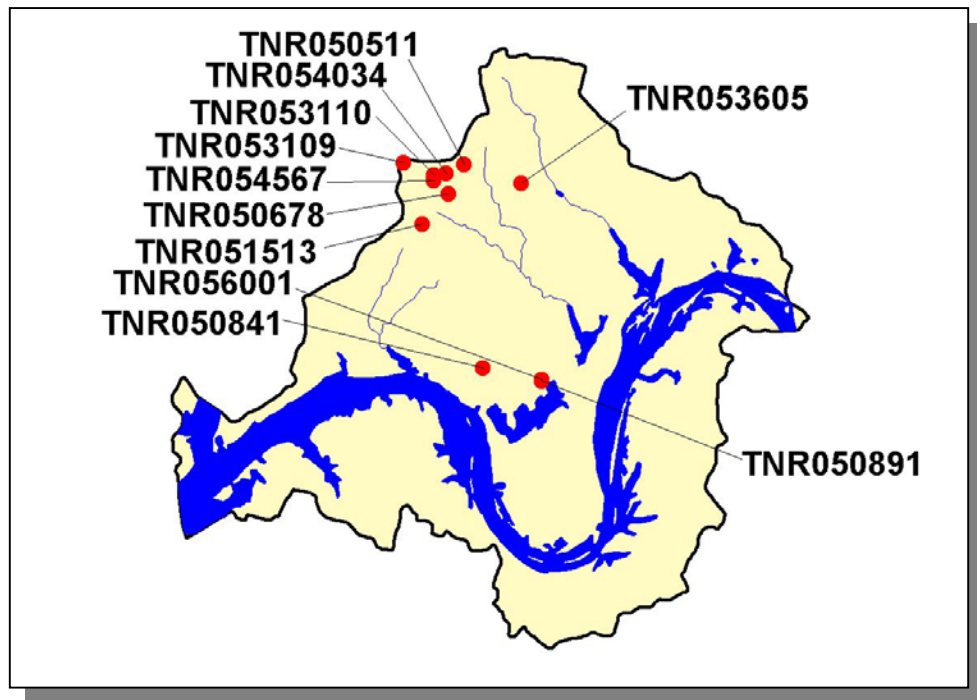
**Figure 4-98. Location of Active Mining Sites in Subwatershed 051302010401.** More information, including the names of mining operations, is provided in Appendix IV.



**Figure 4-99. Location of Ready Mix Concrete Plants (RMCP) in Subwatershed 051302010401.** More information is provided in Appendix IV.



**Figure 4-100. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 051302010401.** More information is provided in Appendix IV.

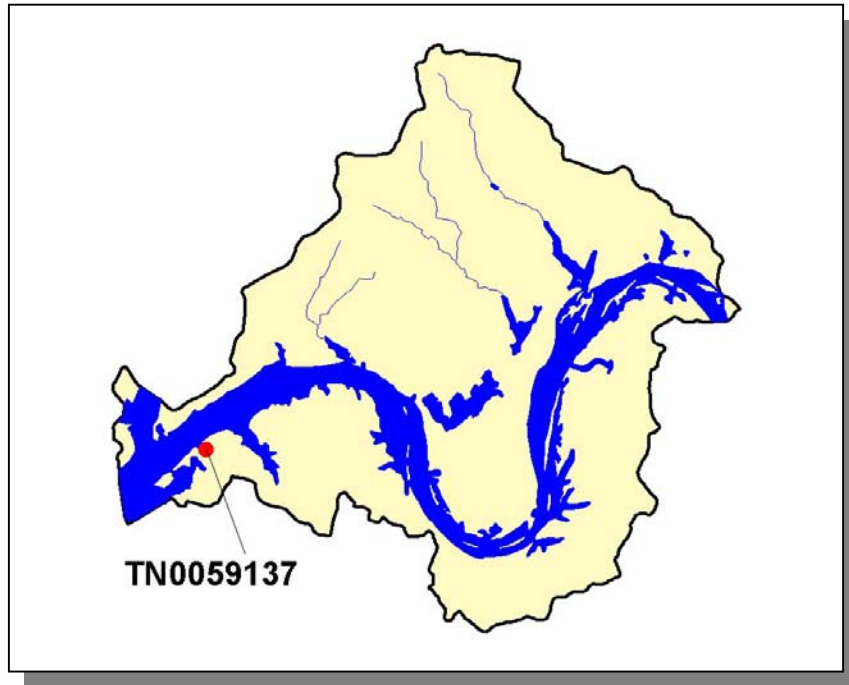


**Figure 4-101. Location of TMSP Sites in Subwatershed 051302010401.** More information, including the names of facilities, is provided in Appendix IV.

**4.2.D.i.a.i. Dischargers to Water Bodies Listed on the 2004 303(d) List**

There is one NPDES facility discharging to water bodies listed on the 2004 303(d) list in Subwatershed 051302010401:

- TN0059137 (Boxwell Reservation) discharges to Spence Creek Embayment @ RM 1.0



**Figure 4-102. Location of NPDES Dischargers to Water Bodies Listed on the 2004 303(d) List in Subwatershed 051302010401.** More information, including the names of facilities, is provided in Appendix IV.

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PERMIT #	1Q10	3Q10	7Q10	3Q20	QDESIGN
TN0059137					

**Table 4-78. Receiving Stream Flow Information for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051302010401.** Data are in million gallons per day (MGD). Data were obtained from the USGS publication Flow Duration and Low Flows of Tennessee Streams Through 1992 or from permit files.

PERMIT #	FLOW
TN0059137	X

**Table 4-79. Monitoring Requirements for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051302010401.**

PERMIT #	CBOD <sub>5</sub>	NH <sub>3</sub>	TRC	TSS	SETTLEABLE SOLIDS	DO	pH
TN0059137	X		X	X	X	X	X

**Table 4-80. Inorganic Parameters Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051302010401.** CBOD<sub>5</sub>, Carbonaceous Biochemical Oxygen Demand (5-Day); TRC, Total Residual Chlorine; TSS, Total Suspended Solids.

PERMIT #	<i>E. coli</i>	FECAL COLIFORM
TN0059137	X	X

**Table 4-81. Bacteria Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051302010401.**

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**4.2.D.i.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
1,055	2,087	67	<5	102	12

**Table 4-82. Summary of Livestock Count Estimates in Subwatershed 051302010401.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Sumner	22,296	45,116	1,515	50	2,500	189
Wilson	27,209	51,090	1,505	1,585	1,700	465

**Table 4-83. Summary of Livestock Count Estimates in Sumner and Wilson Counties.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

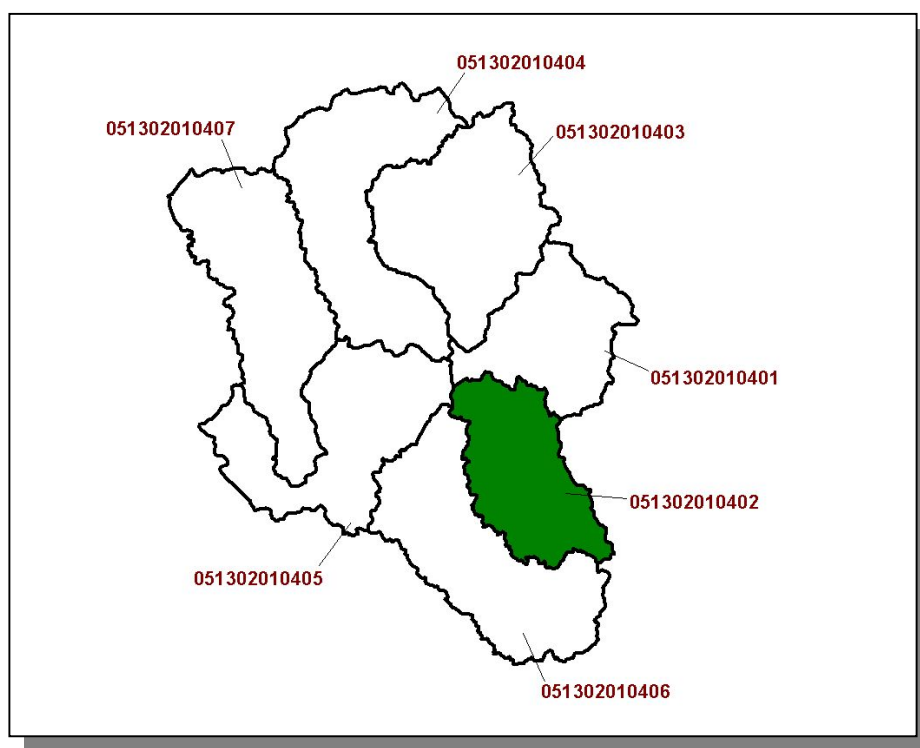
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Sumner	88.2	88.2	2.0	6.3
Wilson	98.1	97.0	1.7	6.8

**Table 4-84. Forest Acreage and Annual Removal Rates (1987-1994) in Sumner and Wilson Counties.**

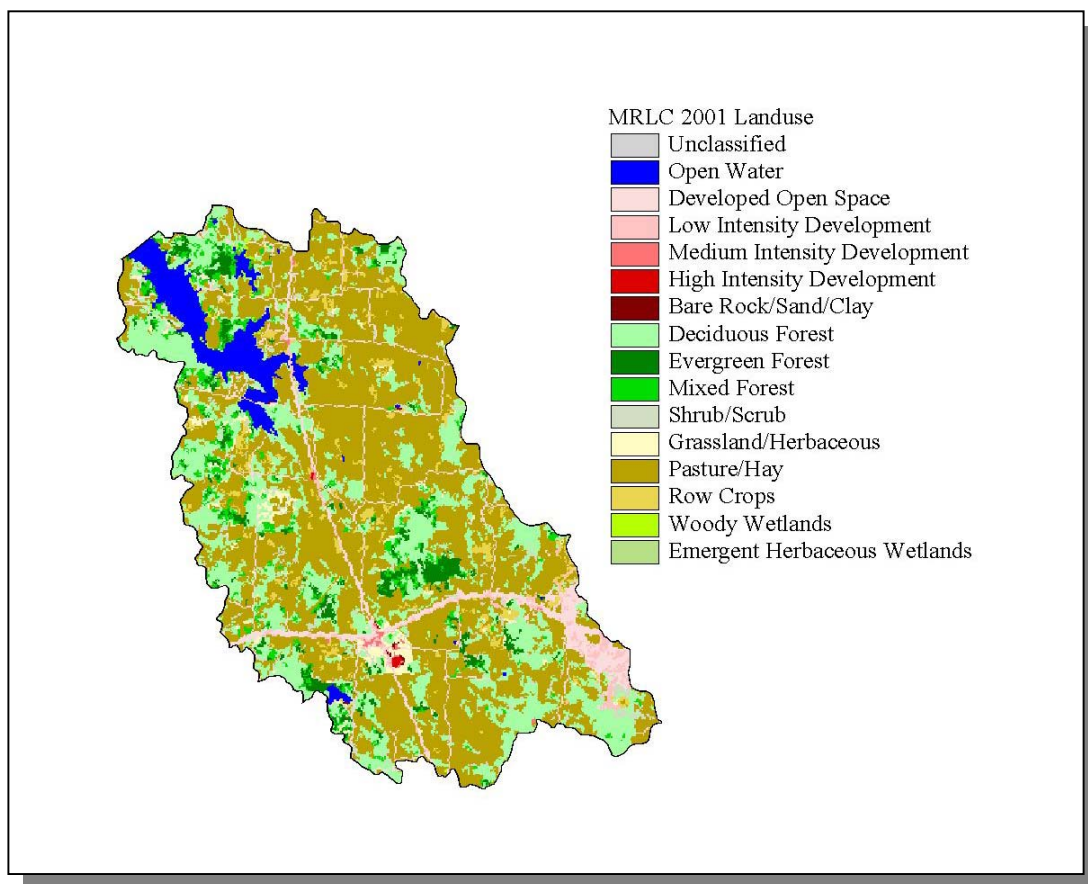
CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.45
Grass (Hayland)	0.32
Legumes, Grass (Hayland)	0.26
Legumes (Hayland)	0.12
Grass, Forbs, Legumes (Mixed Pasture)	0.62
Corn (Row Crops)	10.12
Soybeans (Row Crops)	10.28
Tobacco (Row Crops)	19.23
Wheat (Close-Grown Cropland)	1.97
All Other Close-Grown Cropland	2.49
Other Cropland not Planted	19.23
Conservation Reserve Program Lands	0.26
Farmsteads and Ranch Headquarters	0.32

**Table 4-85. Annual Estimated Total Soil Loss in Subwatershed 051302010401.**

**4.2.D.ii.** 051302010402 (Spencer Creek).

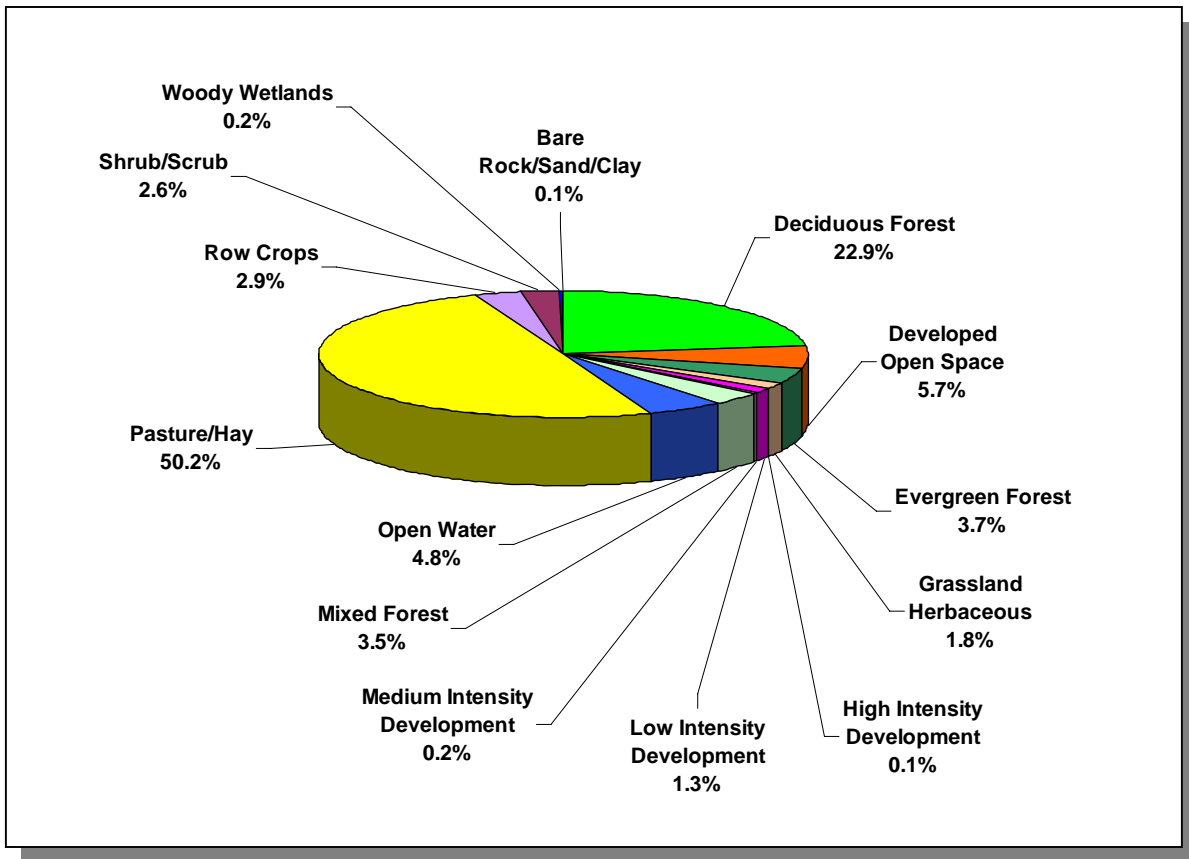


**Figure 4-103. Location of Subwatershed 051302010402.** All HUC-12 subwatershed boundaries are shown for reference.



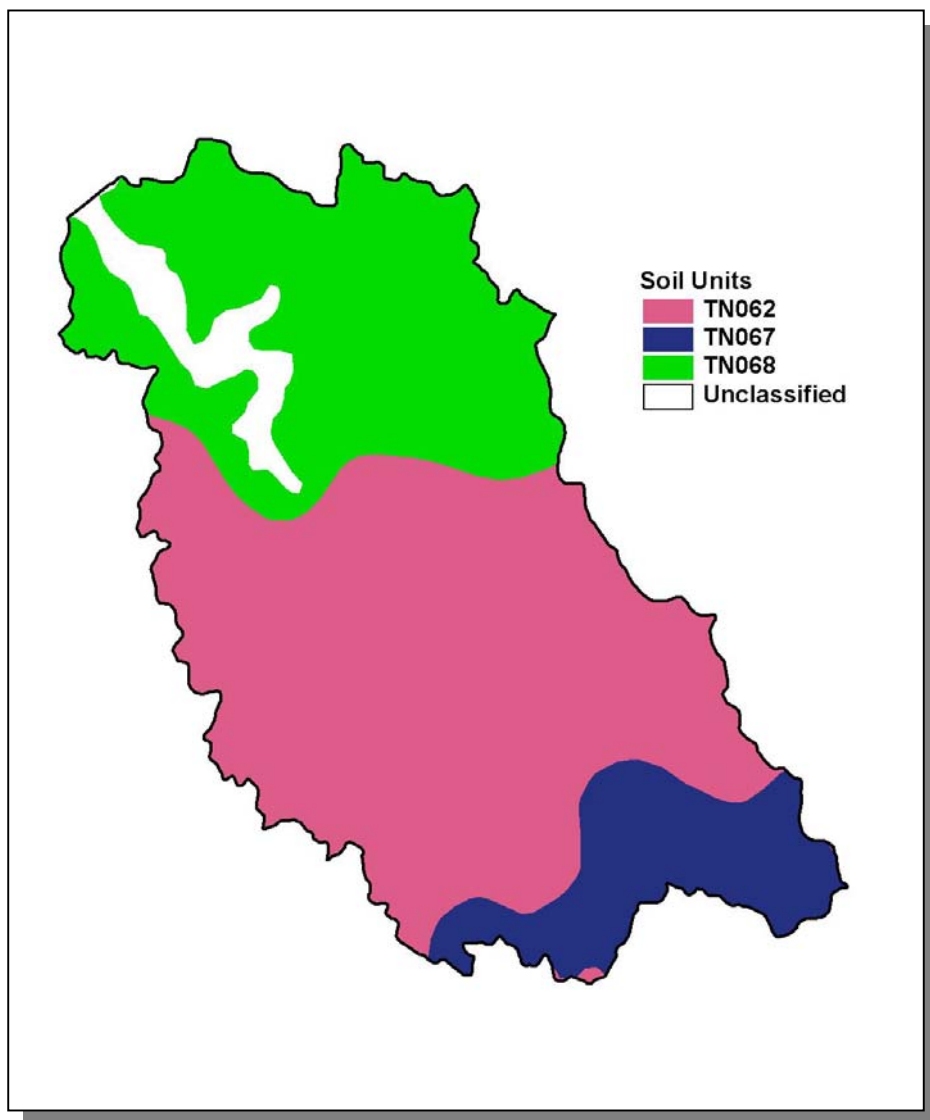
**Figure 4-104. Illustration of Land Use Distribution in Subwatershed 051302010402.**





**Figure 4-105. Land Use Distribution in Subwatershed 051302010402.** More information is provided in Appendix IV.

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**Figure 4-106. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010402.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN062	0.00	C	0.98	4.40	Clayey Loam	0.26
TN067	2.00	C	2.69	5.51	Silty Loam	0.35
TN068	0.00	B	1.35	5.38	Silty Loam	0.37

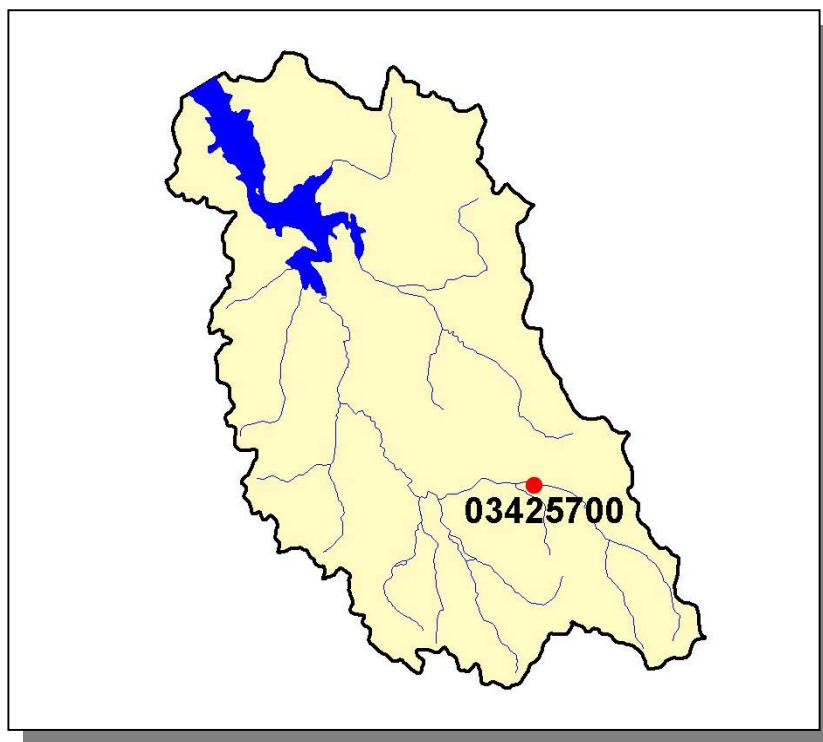
**Table 4-86. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010402.** The definition of “Hydrologic Group” is provided in Appendix IV.

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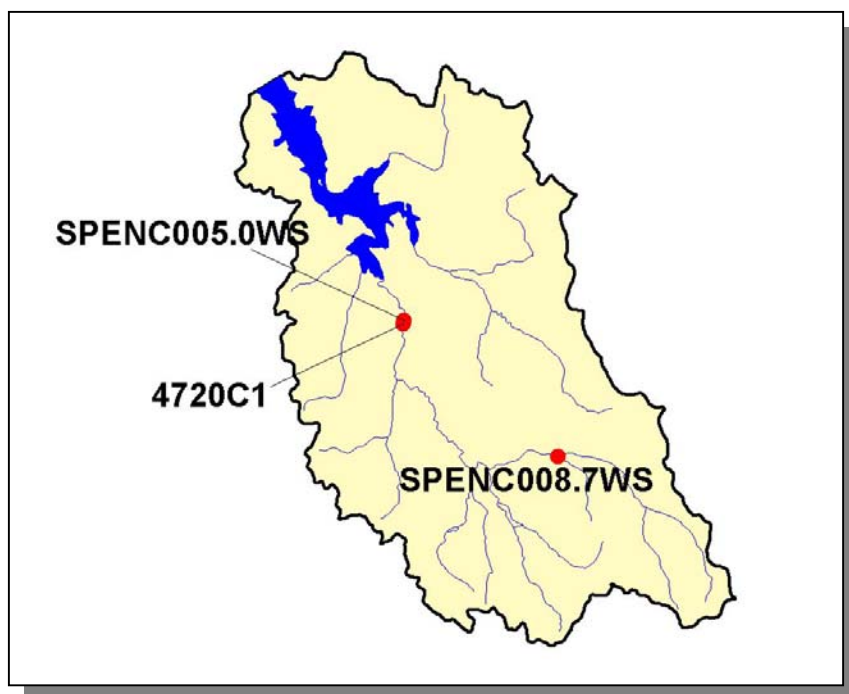
	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	Portion of Watershed (%)	1990	1997	2000	% Change (1990-2000)
Overton								
Putnam								
<b>Total</b>								

*Table 4-87. Population Estimates in Subwatershed 051302010402.*

Sewage

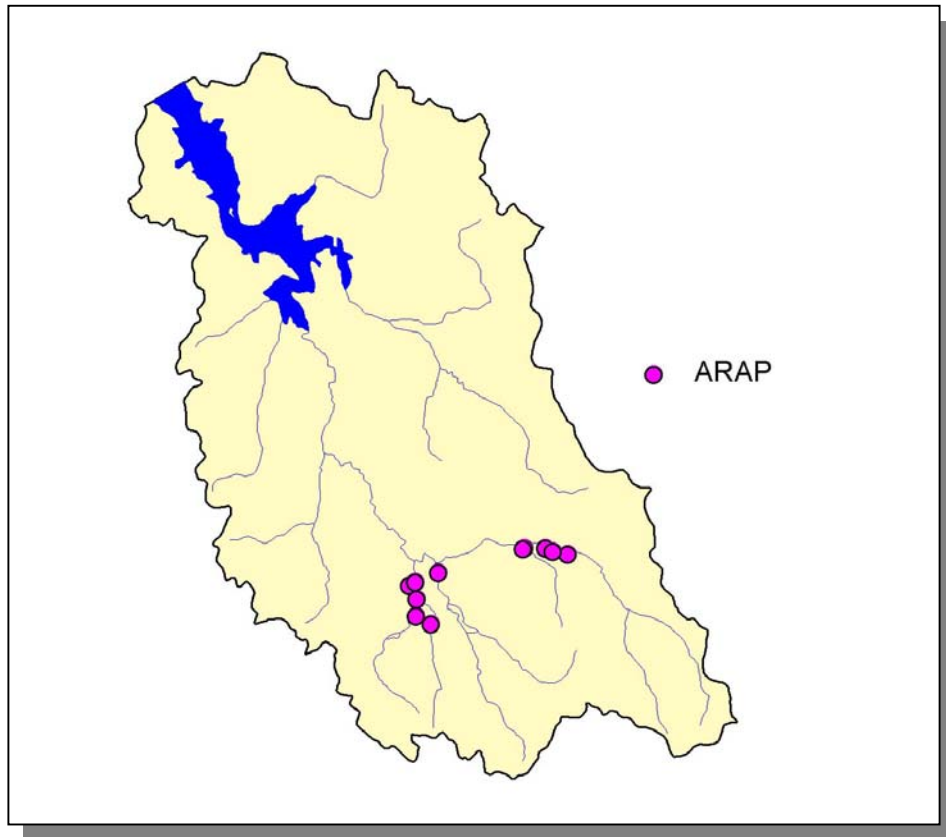


**Figure 4-107. Location of Historical Streamflow Data Collection Sites in Subwatershed 051302010402.** More information is provided in Appendix IV.

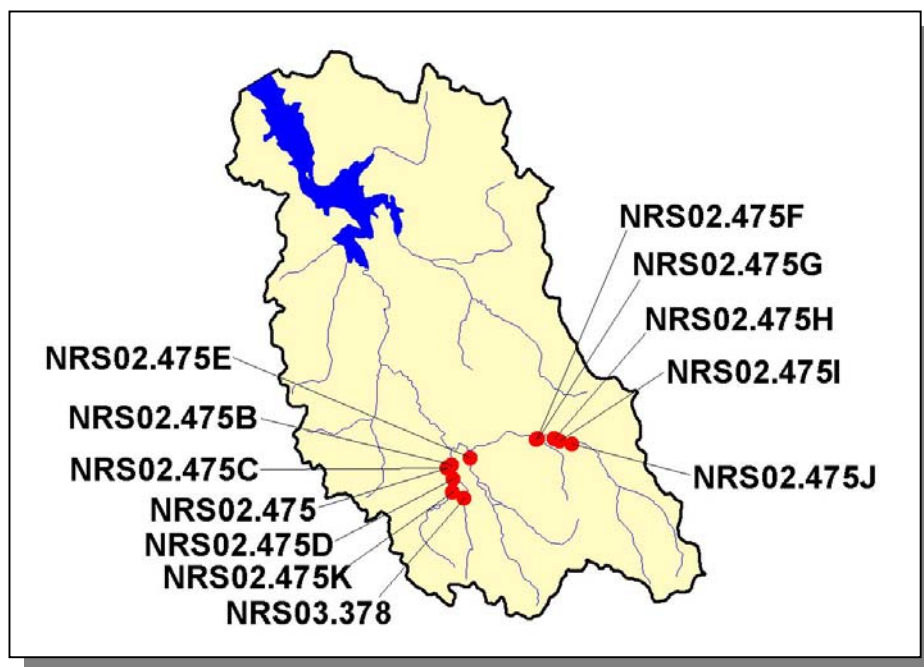


**Figure 4-108. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010402.** More information, including site names and locations, is provided in Appendix IV.

**4.2.D.ii.a. Point Source Contributions.**



**Figure 4-109. Location of Permits Issued in Subwatershed 051302010402.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-110. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 051302010402. More information is provided in Appendix IV.**

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**4.2.D.ii.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
1,971	3,701	109	6	123	34

**Table 4-88. Summary of Livestock Count Estimates in Subwatershed 051302010402.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Wilson	27,209	51,090	1,505	1,585	1,700	465

**Table 4-89. Summary of Livestock Count Estimates in Wilson County.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

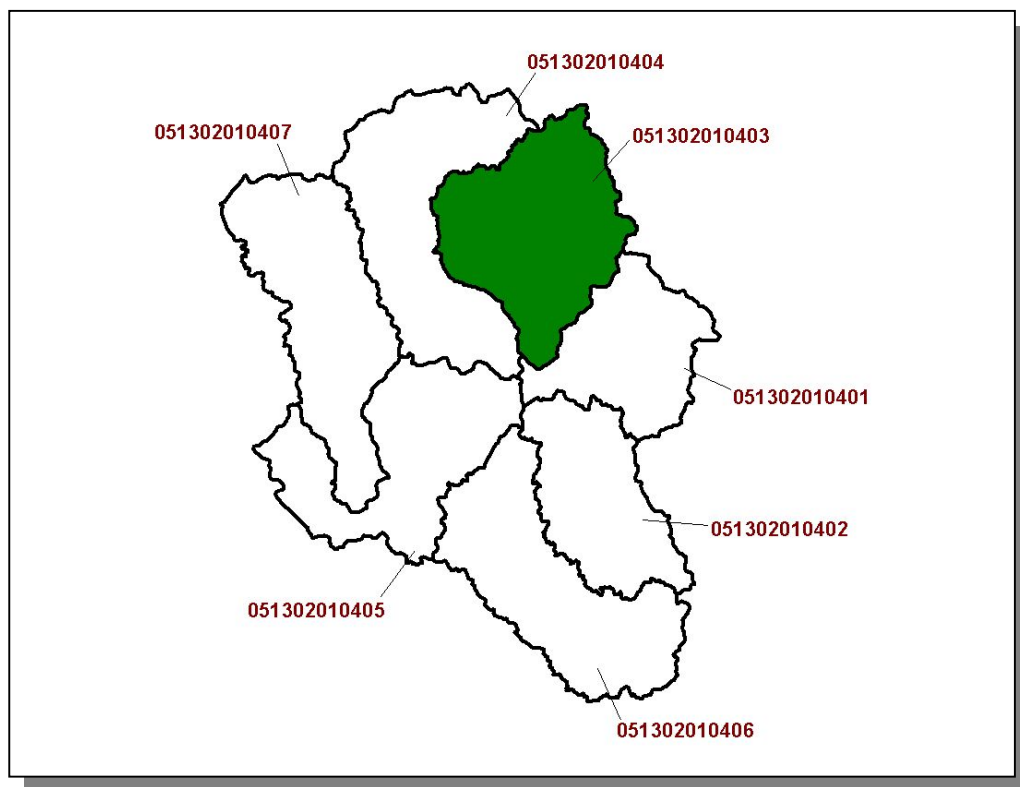
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Wilson	98.1	97.0	1.7	6.8

**Table 4-90. Forest Acreage and Annual Removal Rates (1987-1994) in Wilson County.**

CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.42
Grass (Hayland)	0.37
Legumes, Grass (Hayland)	0.38
Grass, Forbs, Legumes (Mixed Pasture)	0.91
Corn (Row Crops)	2.22
Soybeans (Row Crops)	6.72
Tobacco (Row Crops)	19.23
Wheat (Close-Grown Cropland)	1.96
All Other Close-Grown Cropland	2.49
Farmsteads and Ranch Headquarters	0.26

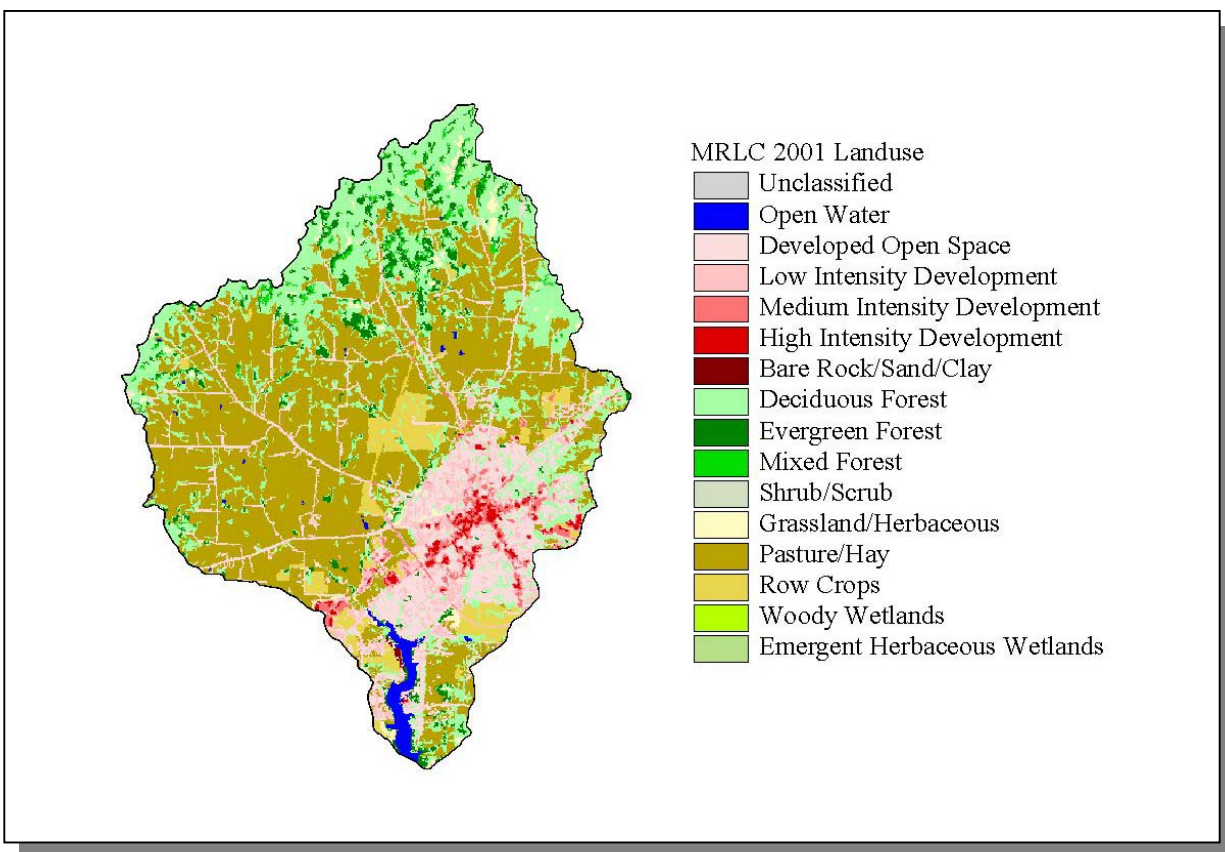
**Table 4-91. Annual Estimated Total Soil Loss in Subwatershed 051302010402.**

**4.2.D.iii. 051302010403 (East Camp Creek).**



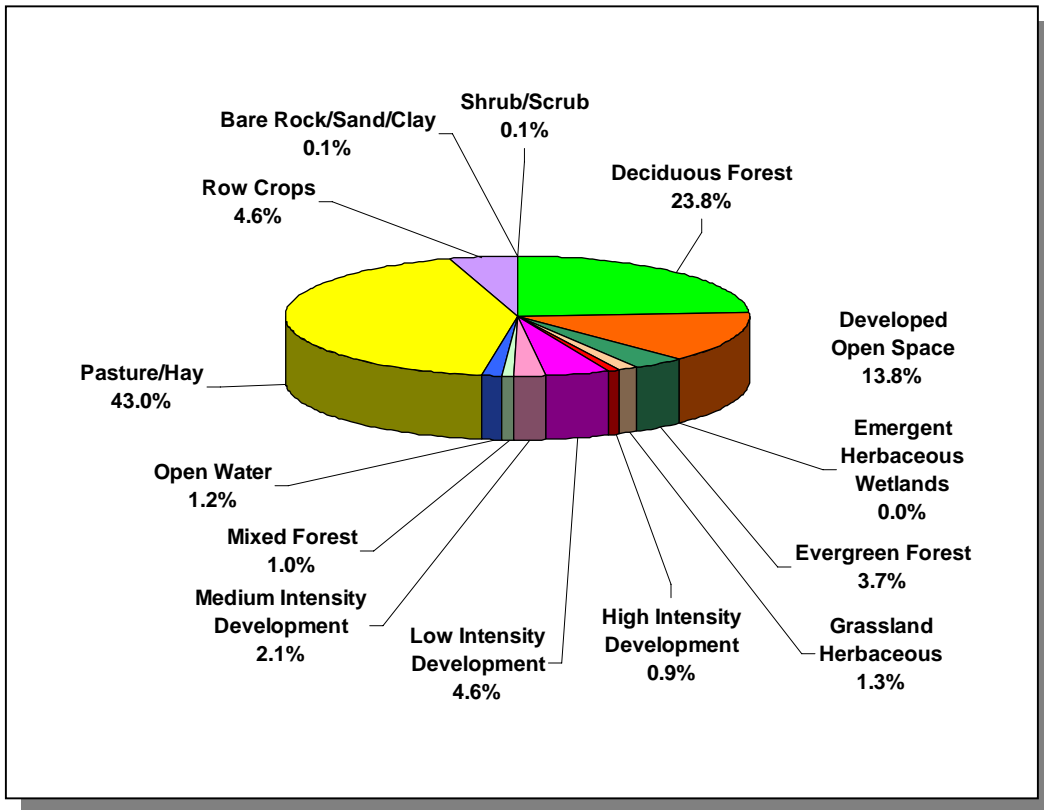
**Figure 4-111. Location of Subwatershed 051302010403.** All HUC-12 subwatershed boundaries are shown for reference.





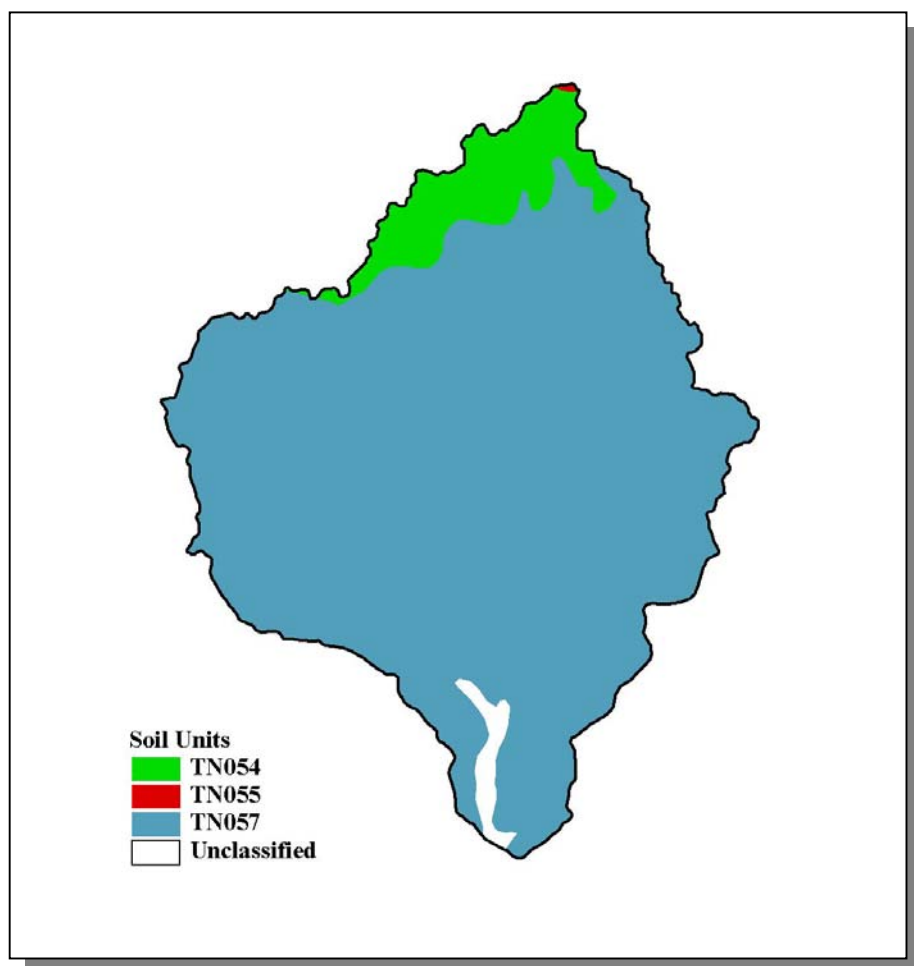
**Figure 4-112. Illustration of Land Use Distribution in Subwatershed 051302010403.**

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**Figure 4-113. Land Use Distribution in Subwatershed 051302010403.** More information is provided in Appendix IV.

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**Figure 4-114. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010403.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN054	0.00	C	3.04	4.84	Loam	1.74
TN055	3.00	C	2.45	5.24	Loam	1.80
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33

**Table 4-92. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010403.** The definition of "Hydrologic Group" is provided in Appendix IV.

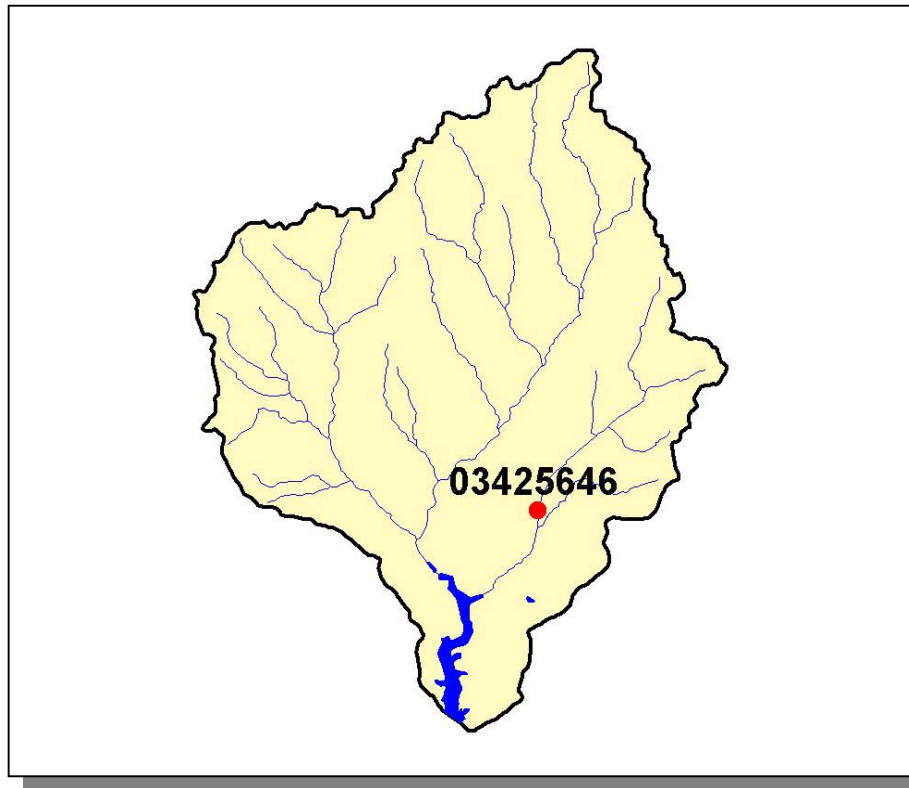
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Sumner	103,281	121,936	130,449	8.24	8,508	10,044	10,746	26.3

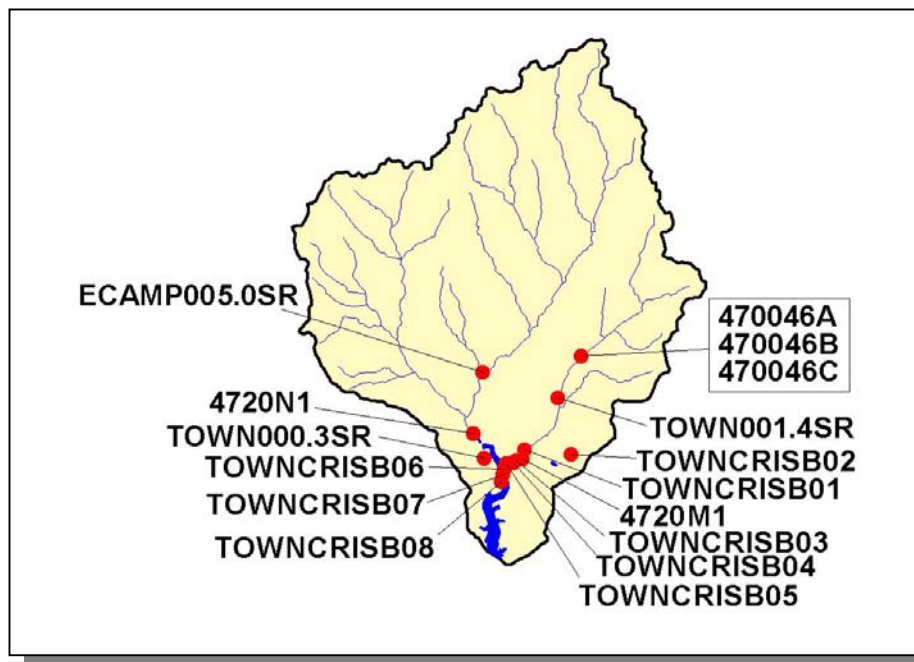
**Table 4-93. Population Estimates in Subwatershed 051302010403.**

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Gallatin	Sumner	18,794	7,635	6,931	704	0

**Table 4-94. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051302010403.**

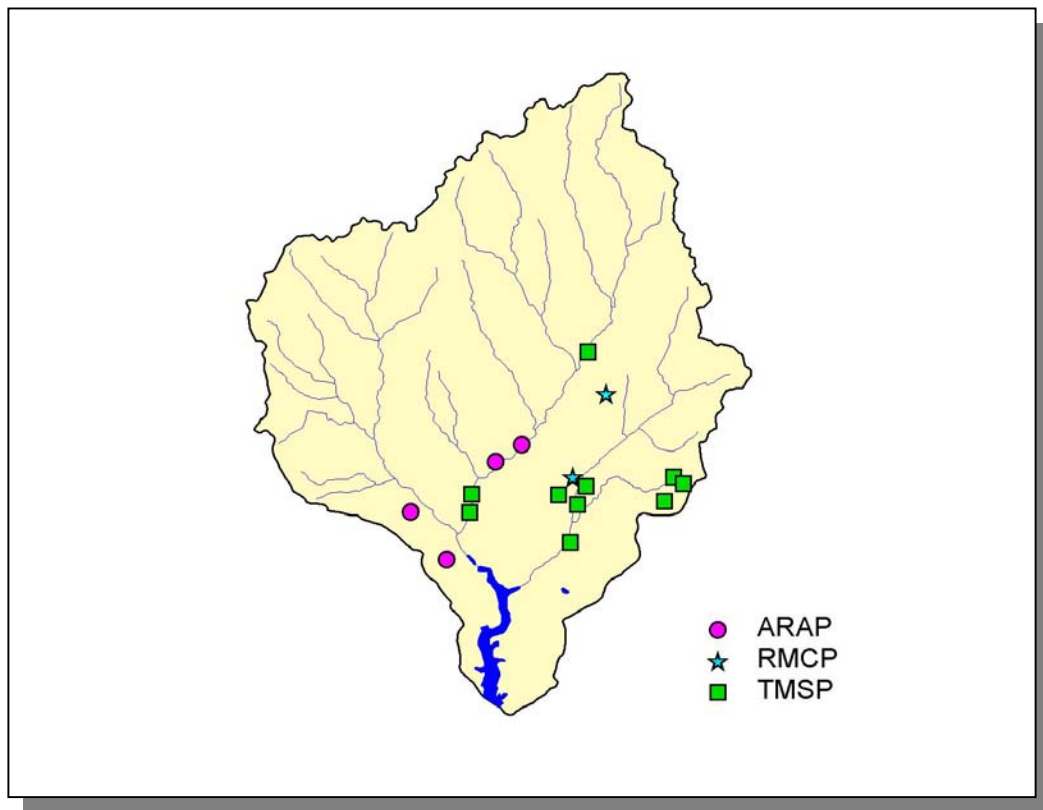


**Figure 4-115. Location of Historical Streamflow Data Collection Sites in Subwatershed 051302010403.** More information is provided in Appendix IV.

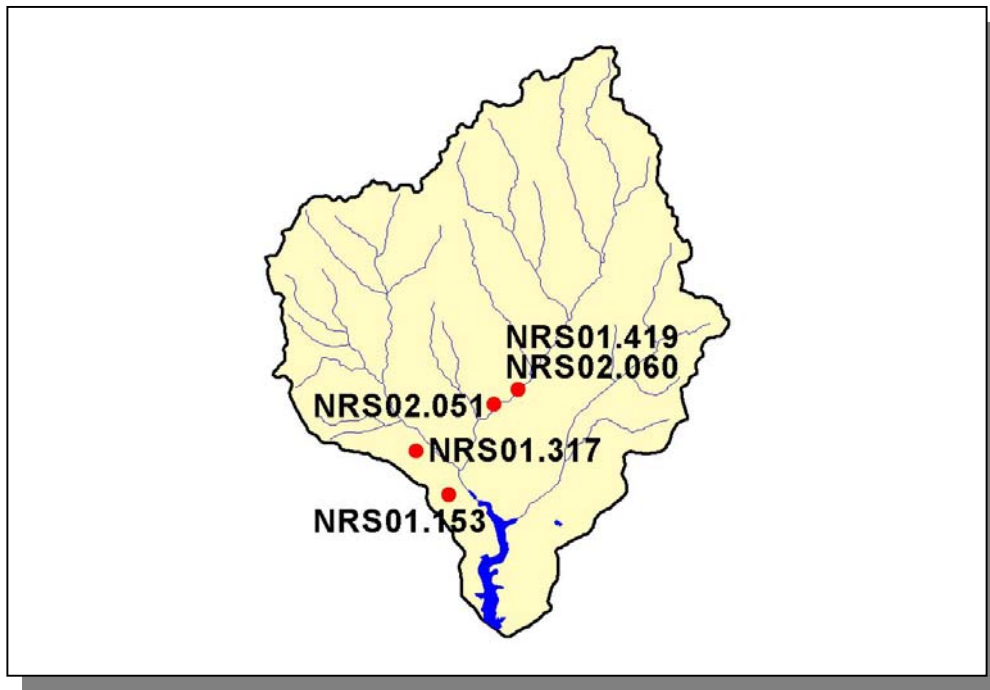


**Figure 4-116. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010403.** More information, including site names and locations, is provided in Appendix IV.

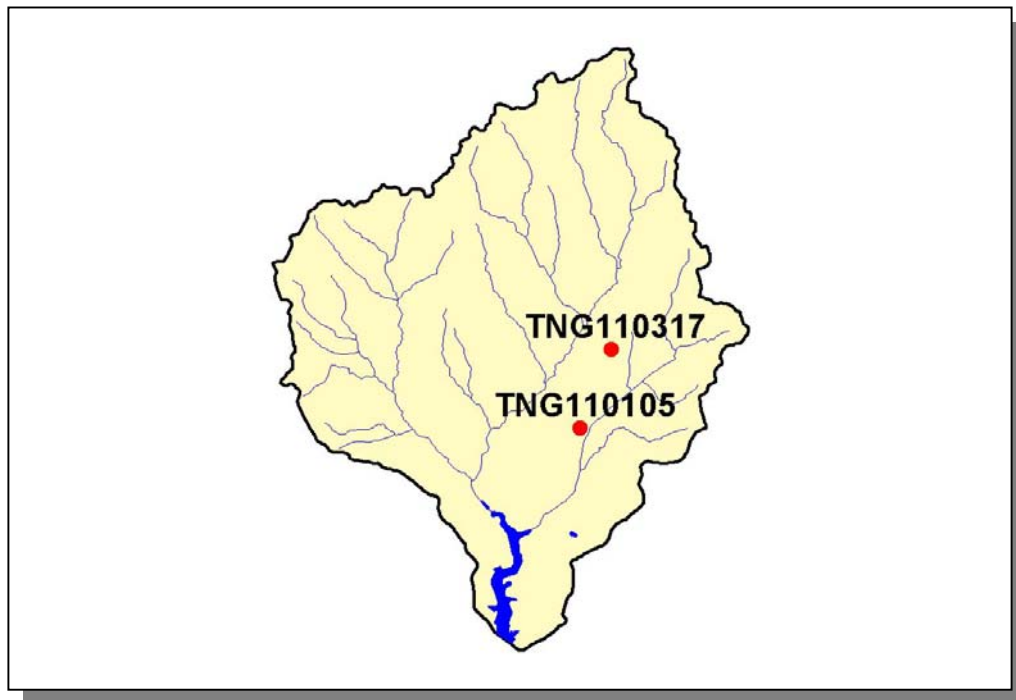
**4.2.D.iii.a. Point Source Contributions.**



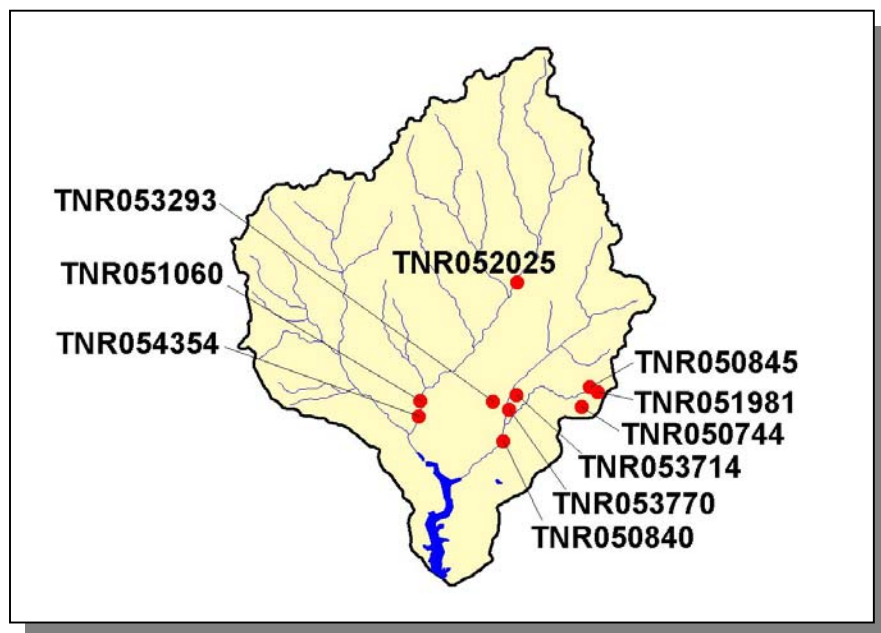
**Figure 4-117. Location of Permits Issued in Subwatershed 051302010403.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-118. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 051302010403. More information is provided in Appendix IV.**



**Figure 4-119. Location of Ready Mix Concrete Plants (RMCP) in Subwatershed 051302010403. More information is provided in Appendix IV.**



**Figure 4-120. Location of TMSP Sites in Subwatershed 051302010403.** More information, including the names of facilities, is provided in Appendix IV.



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**4.2.D.iii.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
2,628	5,804	195	6	322	24

**Table 4-95. Summary of Livestock Count Estimates in Subwatershed 051302010403.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Sumner	22,296	45,116	1,515	50	2,500	189

**Table 4-96. Summary of Livestock Count Estimates in Sumner County.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

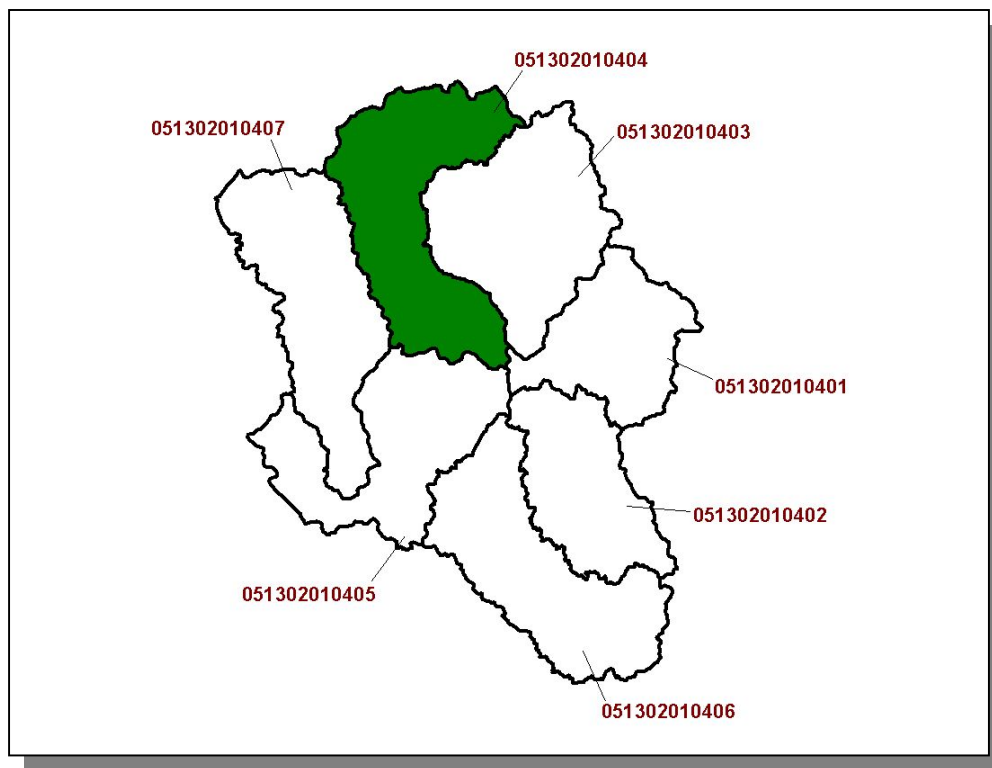
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Sumner	88.2	88.2	2.0	6.3

**Table 4-97. Forest Acreage and Annual Removal Rates (1987-1994) in Sumner County.**

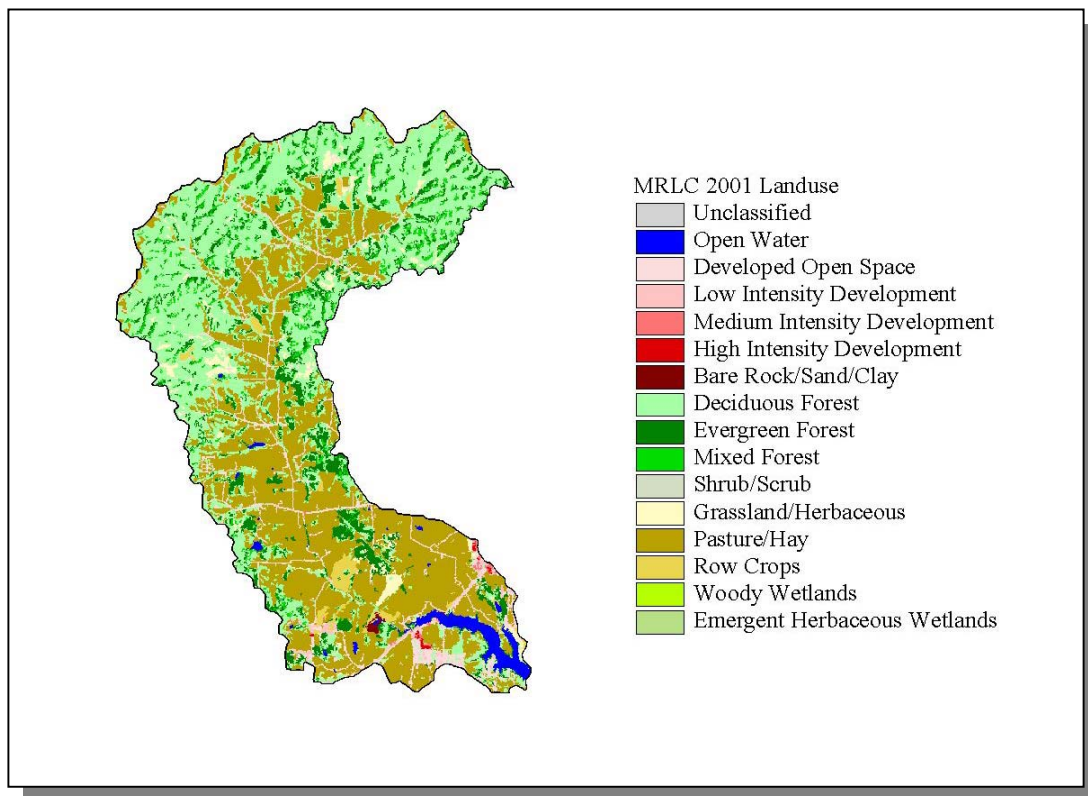
CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.46
Grass (Hayland)	0.31
Legumes, Grass (Hayland)	0.23
Legumes (Hayland)	0.12
Grass, Forbs, Legumes (Mixed Pasture)	0.54
Corn (Row Crops)	12.32
Soybeans (Row Crops)	11.27
Other Cropland not Planted	19.23
Conservation Reserve Program Lands	0.26
Farmsteads and Ranch Headquarters	0.34

**Table 4-98. Annual Estimated Total Soil Loss in Subwatershed 051302010403.**

**4.2.D.iv. 051302010404 (Station Camp Creek).**

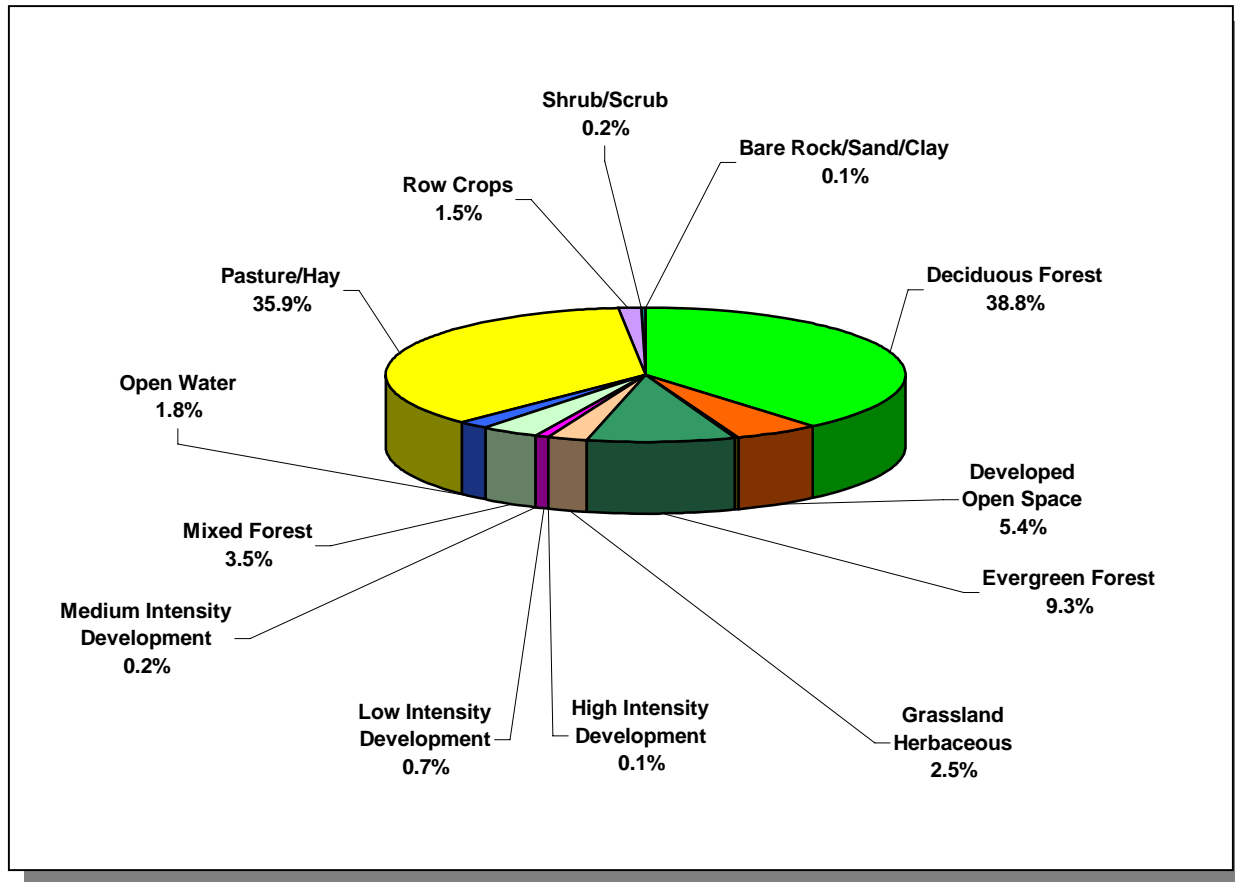


**Figure 4-121. Location of Subwatershed 051302010404.** All HUC-12 subwatershed boundaries are shown for reference.



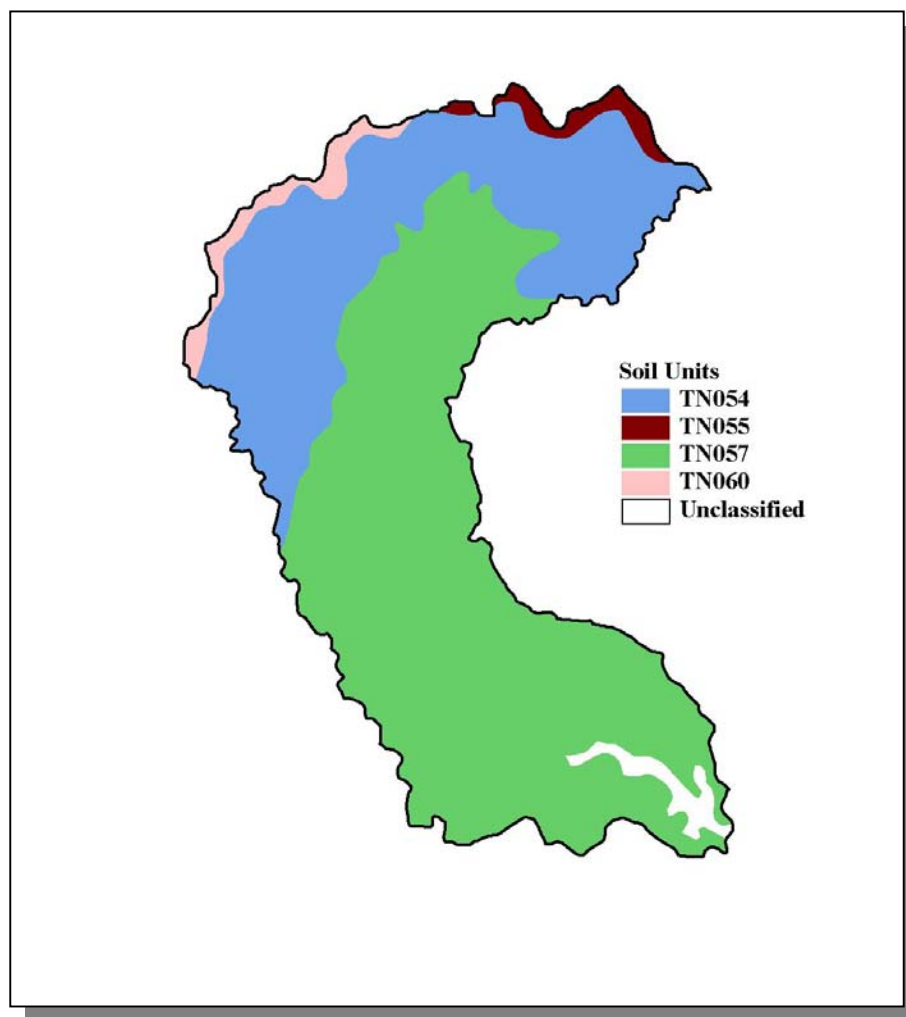
**Figure 4-122. Illustration of Land Use Distribution in Subwatershed 051302010404.**

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**Figure 4-123. Land Use Distribution in Subwatershed 051302010404.** More information is provided in Appendix IV.

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**Figure 4-124. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010404.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN054	0.00	C	3.04	4.84	Loam	0.32
TN055	3.00	C	2.45	5.24	Loam	0.34
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN060	5.00	B	1.30	5.32	Silty Loam	0.39

**Table 4-99. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010404.** The definition of "Hydrologic Group" is provided in Appendix IV.

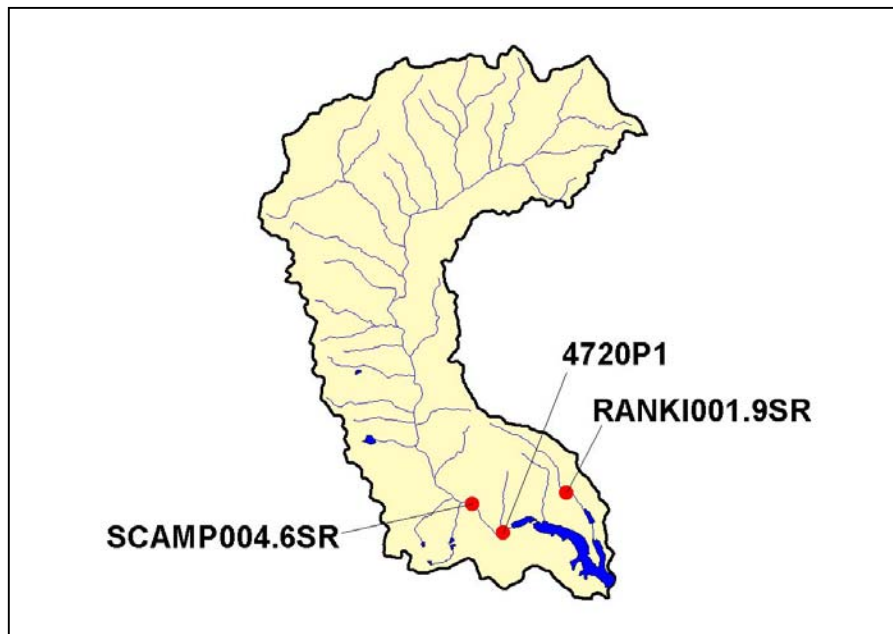
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Sumner	103,281	121,936	130,449	8.64	8,926	10,539	11,275	26.3

**Table 4-100. Population Estimates in Subwatershed 051302010404.**

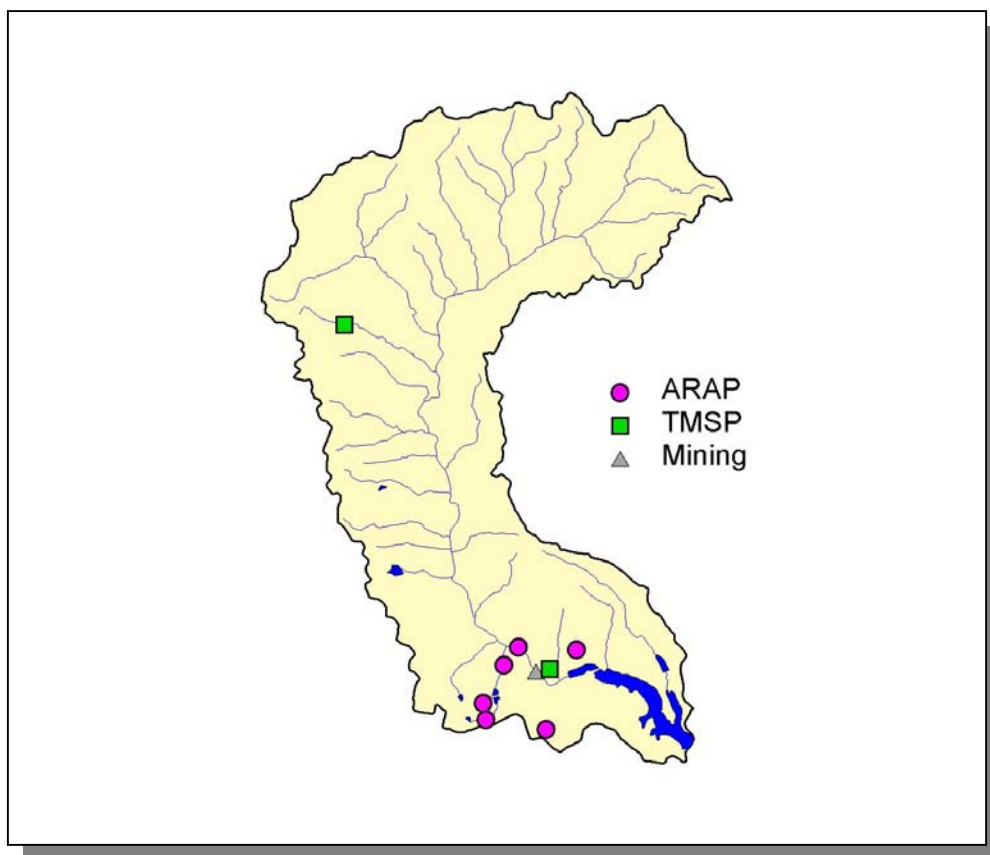
Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Gallatin	Sumner	18,794	7,635	6,931	704	0
Hendersonville	Sumner	32,188	12,472	8,395	4,069	8
<b>Total</b>		<b>50,982</b>	<b>20,107</b>	<b>15,326</b>	<b>4,773</b>	<b>8</b>

**Table 4-101. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051302010404.**

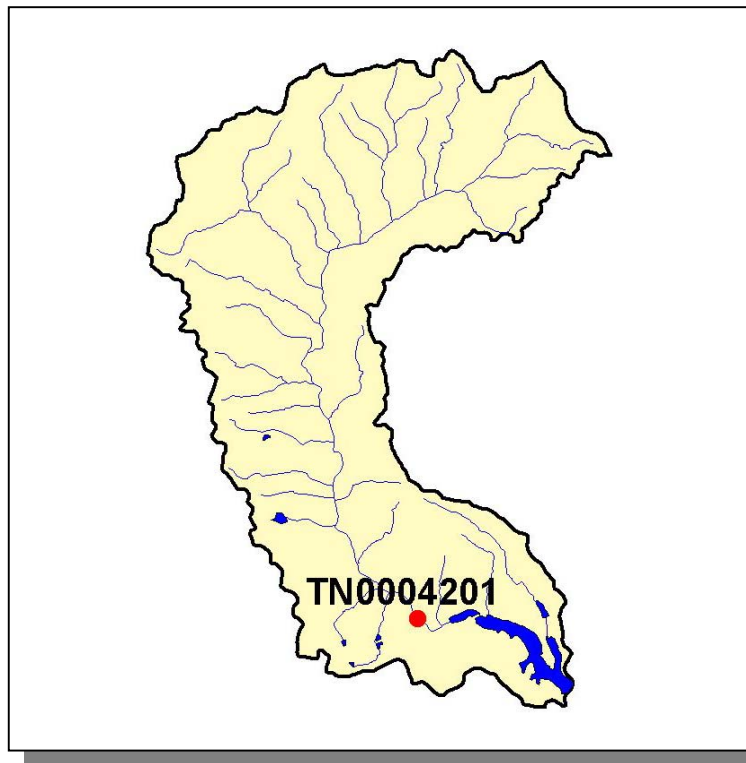


**Figure 4-125. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010404.** More information, including site names and locations, is provided in Appendix IV.

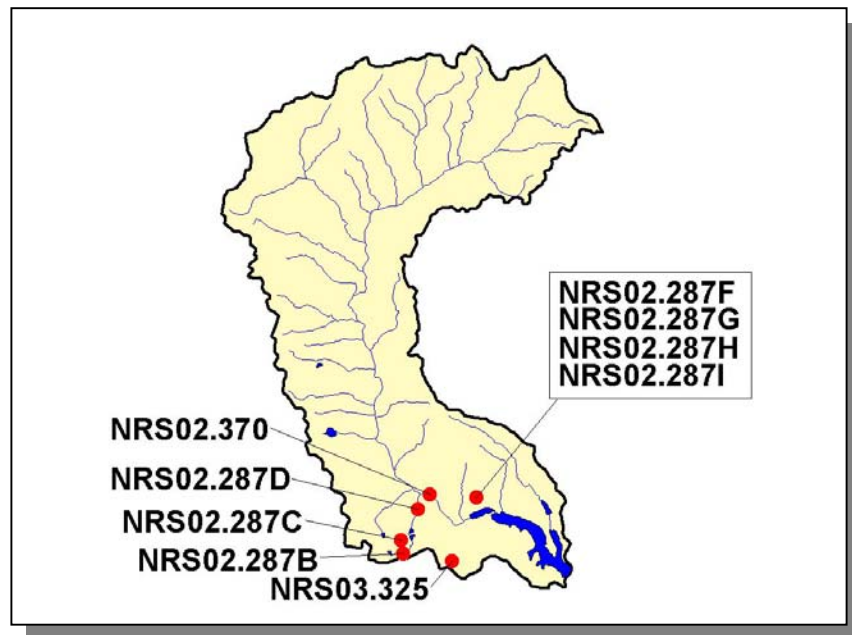
**4.2.D.iv.a. Point Source Contributions.**



**Figure 4-126. Location of Permits Issued in Subwatershed 051302010404.** More information, including the names of facilities, is provided in Appendix IV.

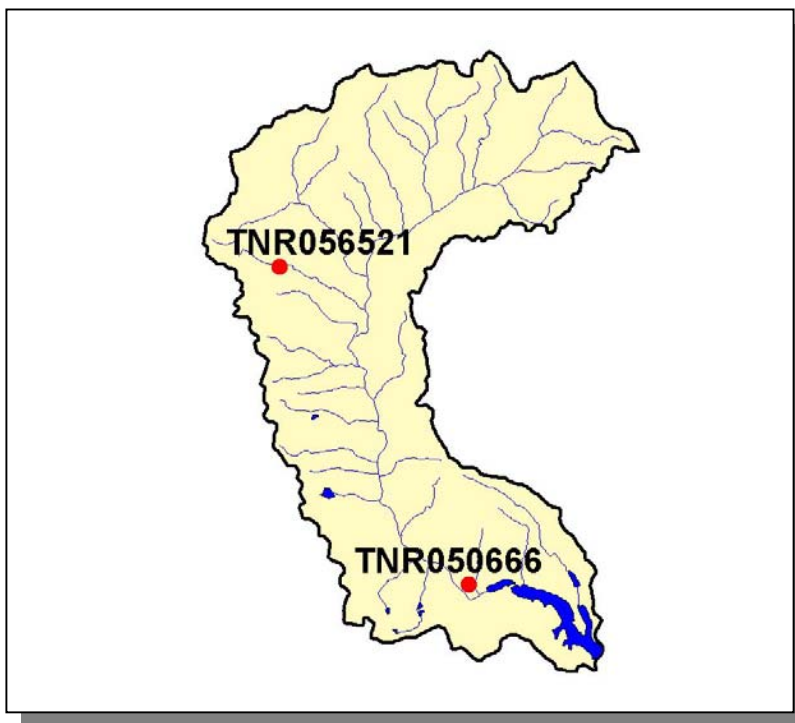


**Figure 4-127. Location of Active Mining Sites in Subwatershed 051302010404.** More information, including the names of mining operations, is provided in Appendix IV.



**Figure 4-128. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 051302010404.** More information is provided in Appendix IV.





**Figure 4-129. Location of TMSP Sites in Subwatershed 051302010404.** More information, including the names of facilities, is provided in Appendix IV.

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**4.2.D.iv.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
2,454	4,967	167	6	275	21

**Table 4-102. Summary of Livestock Count Estimates in Subwatershed 051302010404.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Sumner	22,296	45,116	1,515	50	2,500	189

**Table 4-103. Summary of Livestock Count Estimates in Sumner County.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

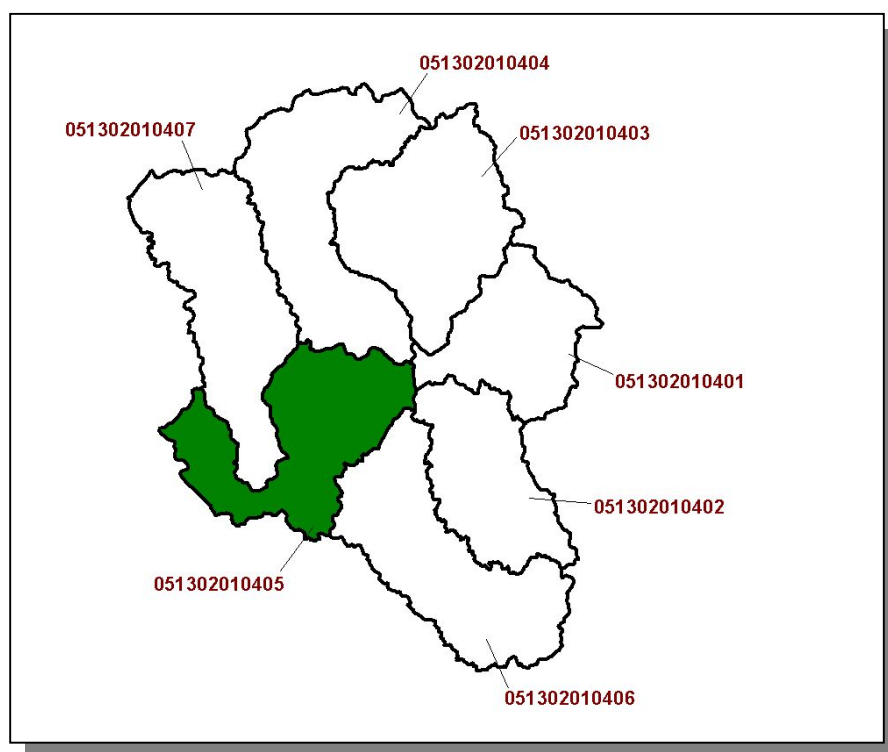
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Sumner	88.2	88.2	2.0	6.3

**Table 4-104. Forest Acreage and Annual Removal Rates (1987-1994) in Sumner County.**

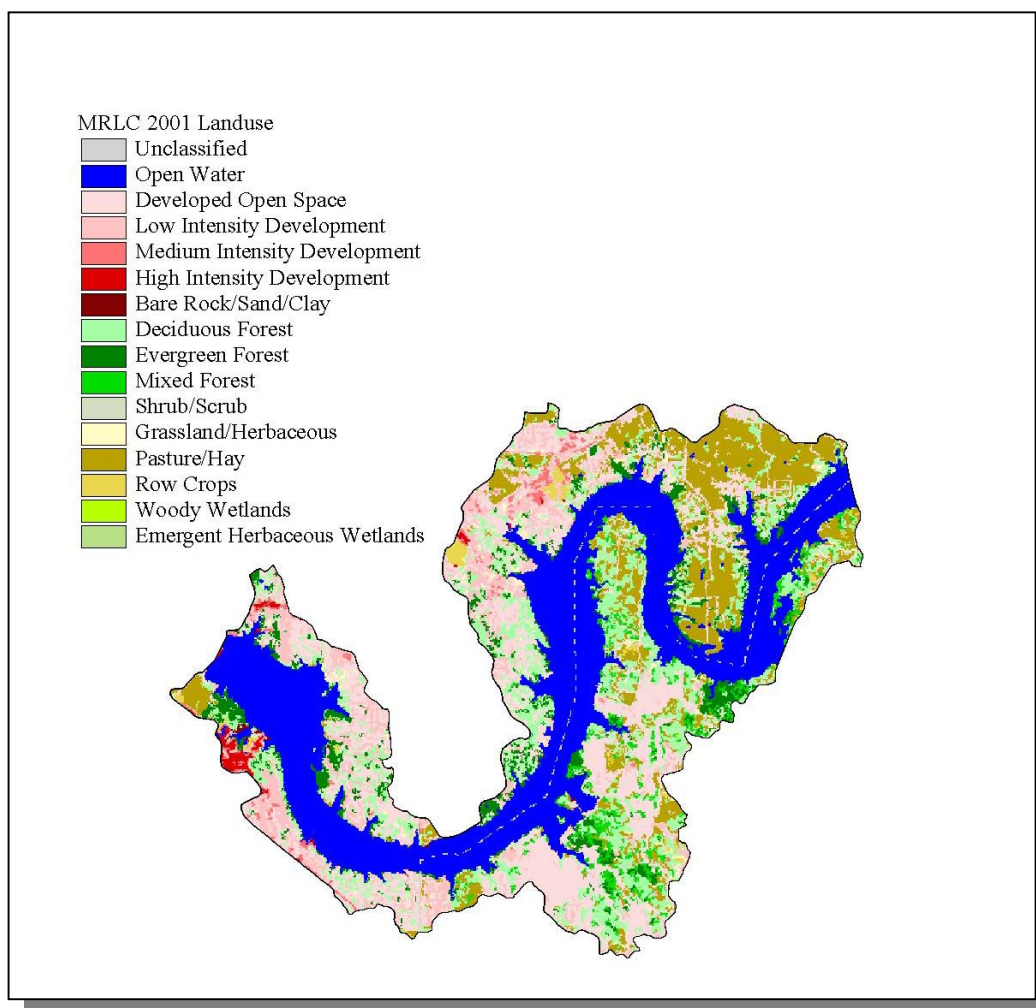
CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.46
Grass (Hayland)	0.31
Legumes, Grass (Hayland)	0.23
Legumes (Hayland)	0.12
Grass, Forbs, Legumes (Mixed Pasture)	0.54
Corn (Row Crops)	12.32
Soybeans (Row Crops)	11.27
Other Cropland not Planted	19.23
Conservation Reserve Program Lands	0.26
Farmsteads and Ranch Headquarters	0.34

**Table 4-105. Annual Estimated Total Soil Loss in Subwatershed 051302010404.**

**4.2.D.v. 051302010405 (Cumberland River).**

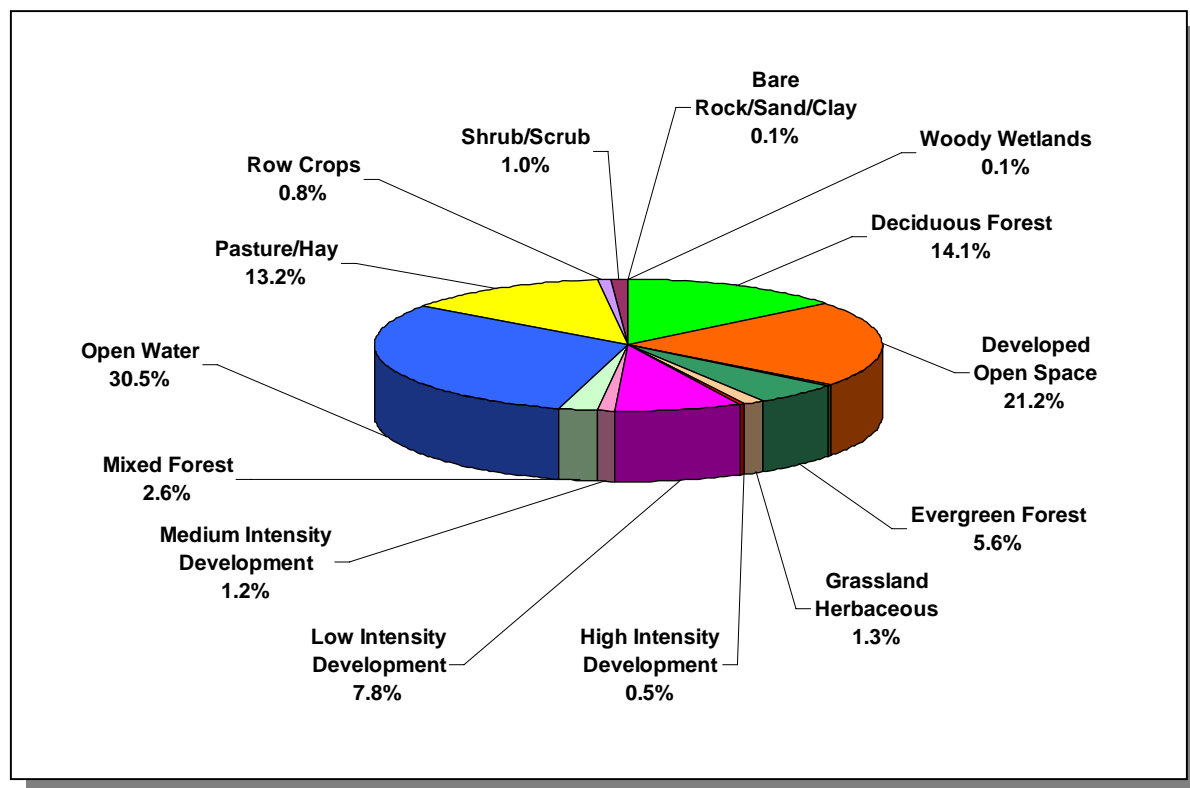


**Figure 4-130. Location of Subwatershed 051302010405.** All HUC-12 subwatershed boundaries are shown for reference.



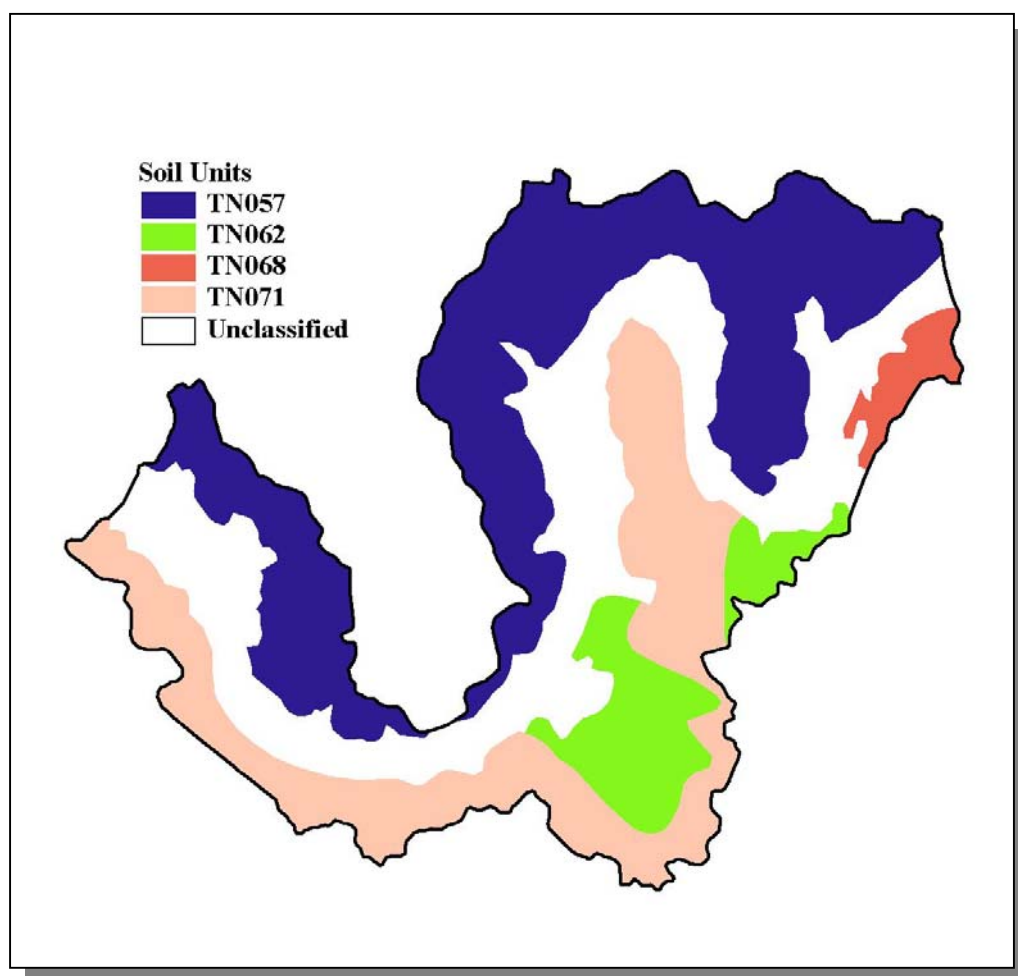
**Figure 4-131. Illustration of Land Use Distribution in Subwatershed 051302010405.**

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**Figure 4-132. Land Use Distribution in Subwatershed 051302010405.** More information is provided in Appendix IV.

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**Figure 4-133. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010405.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN062	0.00	C	0.98	4.40	Clayey Loam	0.26
TN068	0.00	B	1.35	5.38	Silty Loam	0.37
TN071	0.00	C	2.37	5.70	Silty Loam	0.33

**Table 4-106. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010405.** The definition of "Hydrologic Group" is provided in Appendix IV.

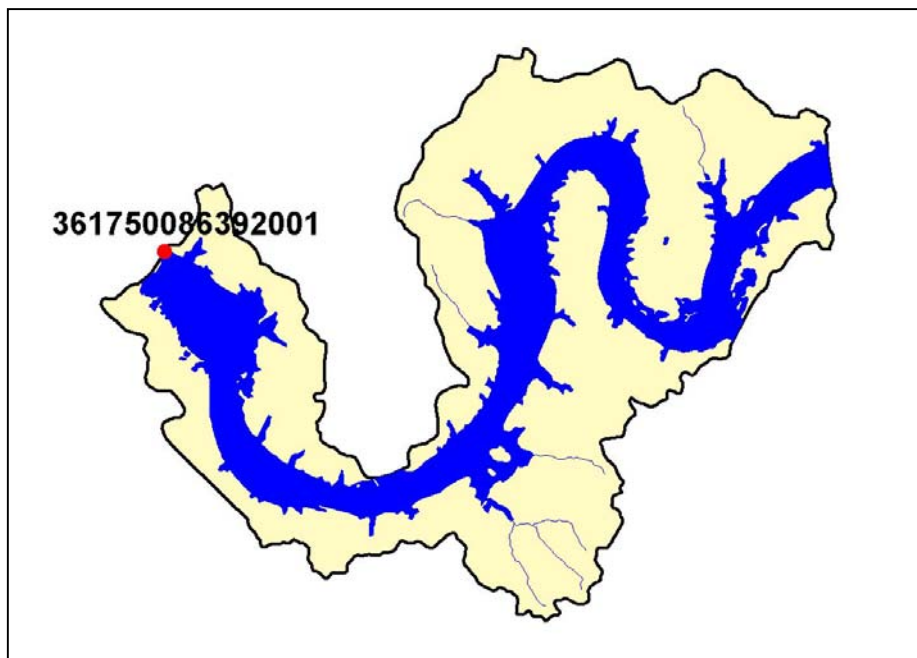
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Davidson	510,784	535,032	569,891	1.04	5,289	5,540	5,901	11.6
Sumner	103,281	121,936	130,449	4.45	4,599	5,429	5,808	26.3
<b>Total</b>	<b>614,065</b>	<b>656,968</b>	<b>700,340</b>		<b>9,888</b>	<b>10,969</b>	<b>11,709</b>	<b>18.4</b>

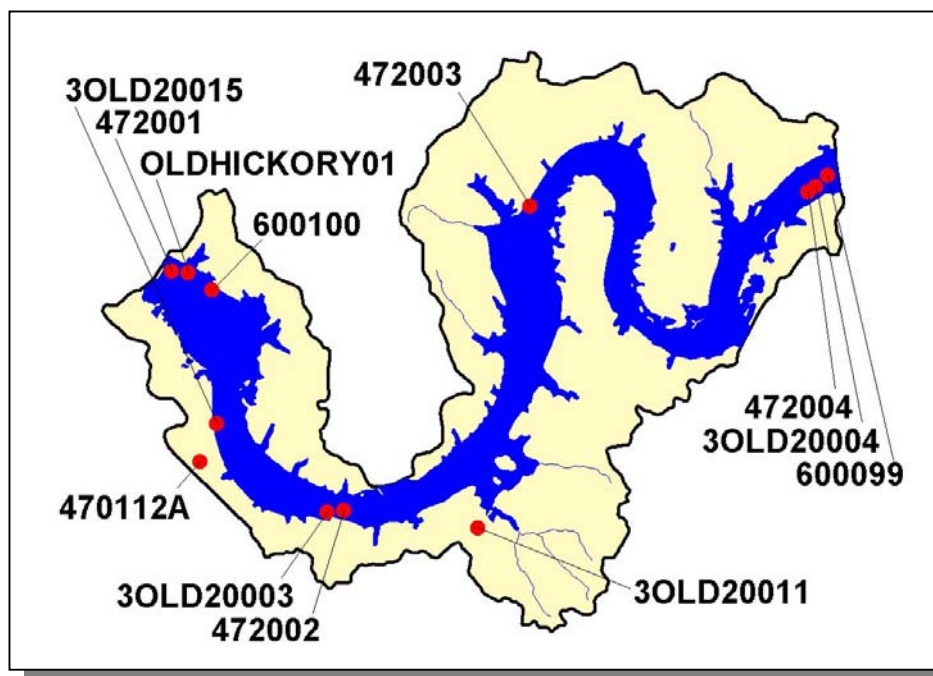
*Table 4-107. Population Estimates in Subwatershed 051302010405.*

Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Mount Juliet	Wilson	5,389	1,926	1,265	661	0
Gallatin	Sumner	18,794	7,635	6,931	704	0
Hendersonville	Sumner	32,188	12,472	8,395	4,069	8
Lakewood	Davidson	1,867	830	582	248	0
Nashville (Remainder)	Davidson	488,518	219,521	203,640	15,576	305
<b>Total</b>		<b>546,756</b>	<b>242,384</b>	<b>220,813</b>	<b>21,258</b>	<b>313</b>

*Table 4-108. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051302010405.*



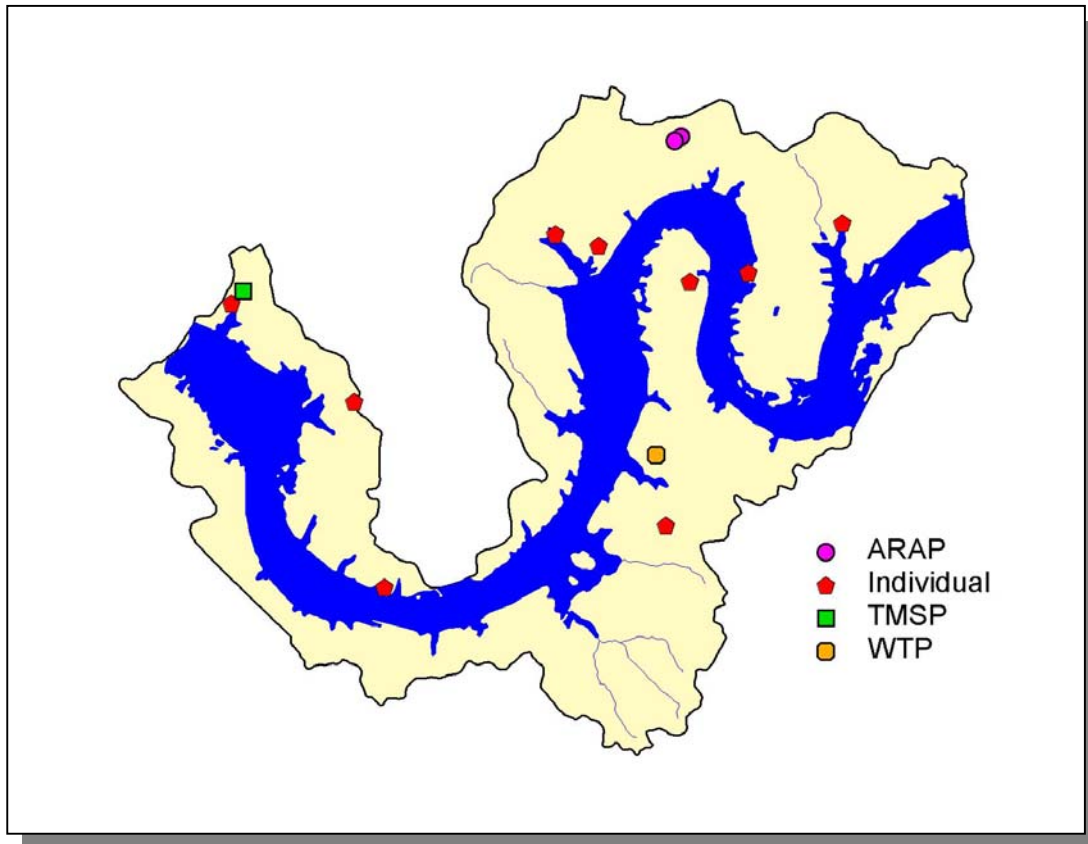
**Figure 4-134. Location of Historical Streamflow Data Collection Sites in Subwatershed 051302010405.** More information is provided in Appendix IV.



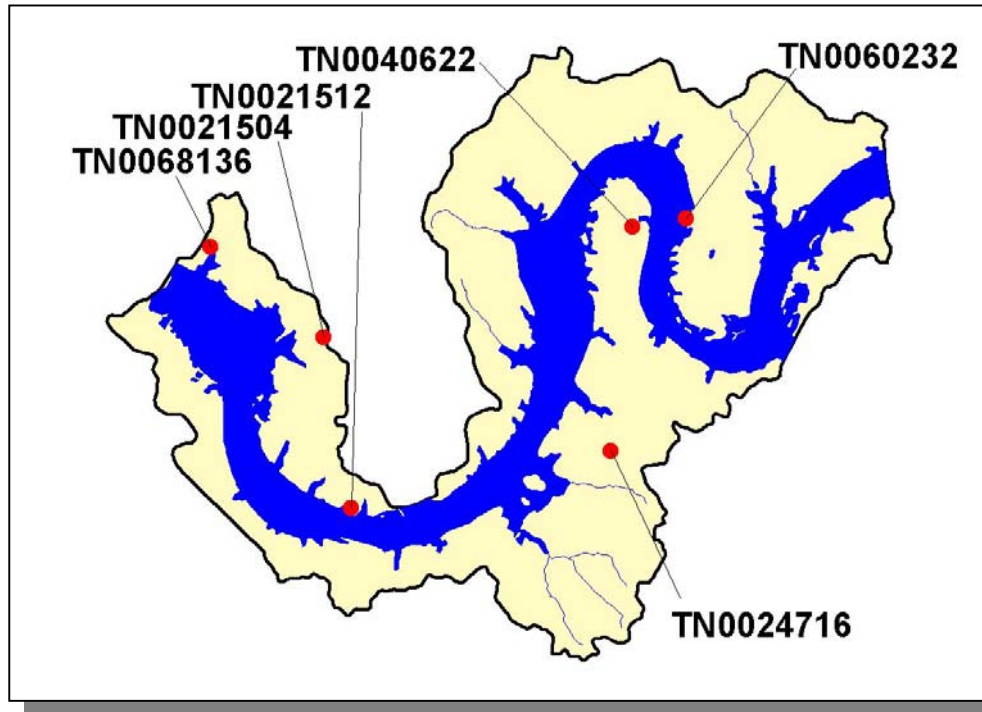
**Figure 4-135. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010405.** More information, including site names and locations, is provided in Appendix IV.



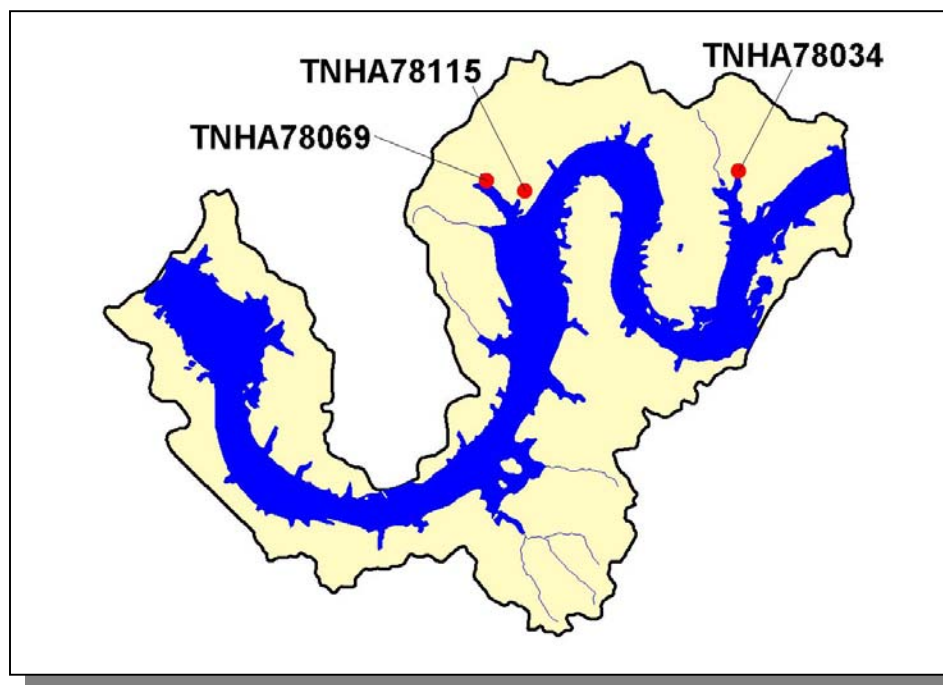
**4.2.D.v.a. Point Source Contributions.**



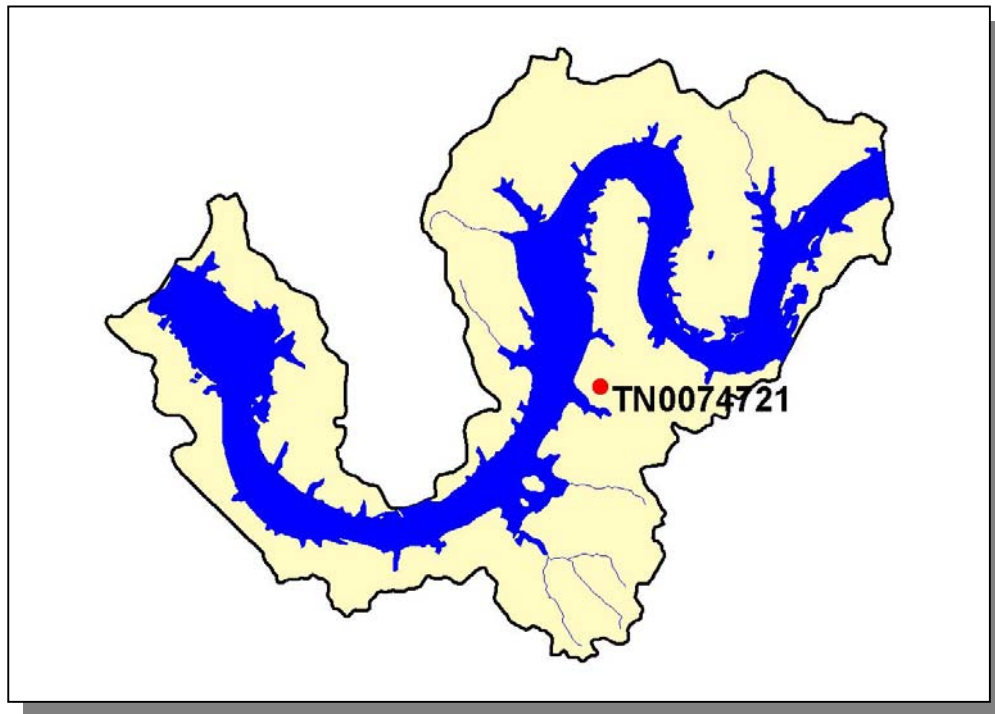
**Figure 4-136. Location of Permits Issued in Subwatershed 051302010405.** More information, including the names of facilities, is provided in Appendix IV.



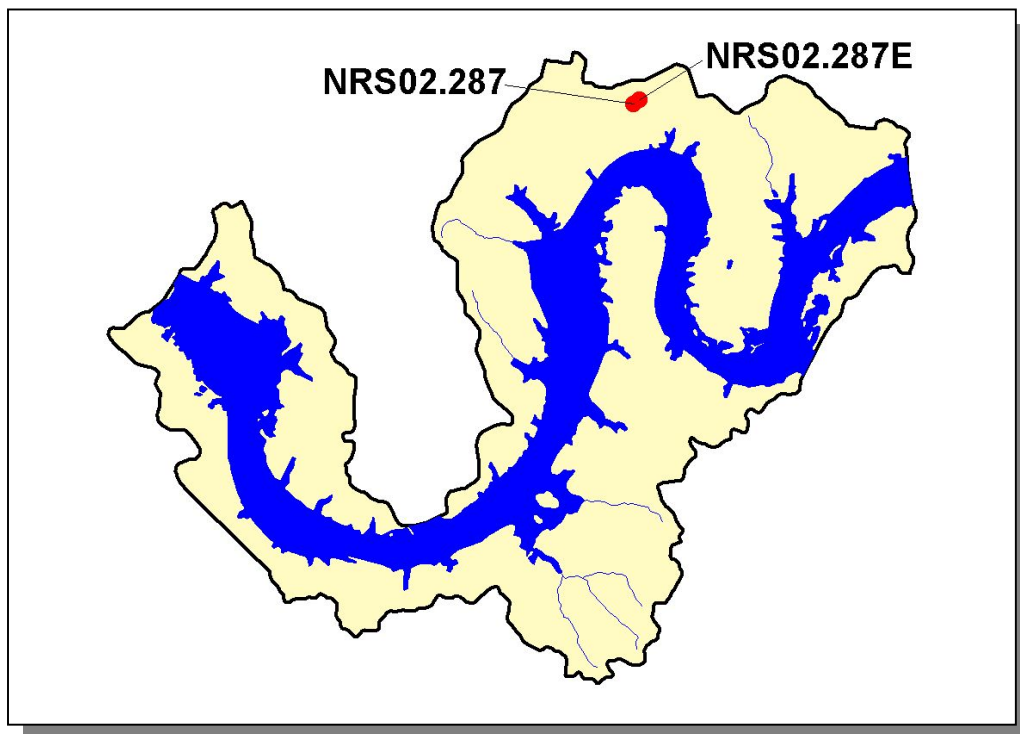
**Figure 4-137. Location of Active NPDES Sites in Subwatershed 051302010405.** More information, including the names of facilities, is provided in Appendix IV.



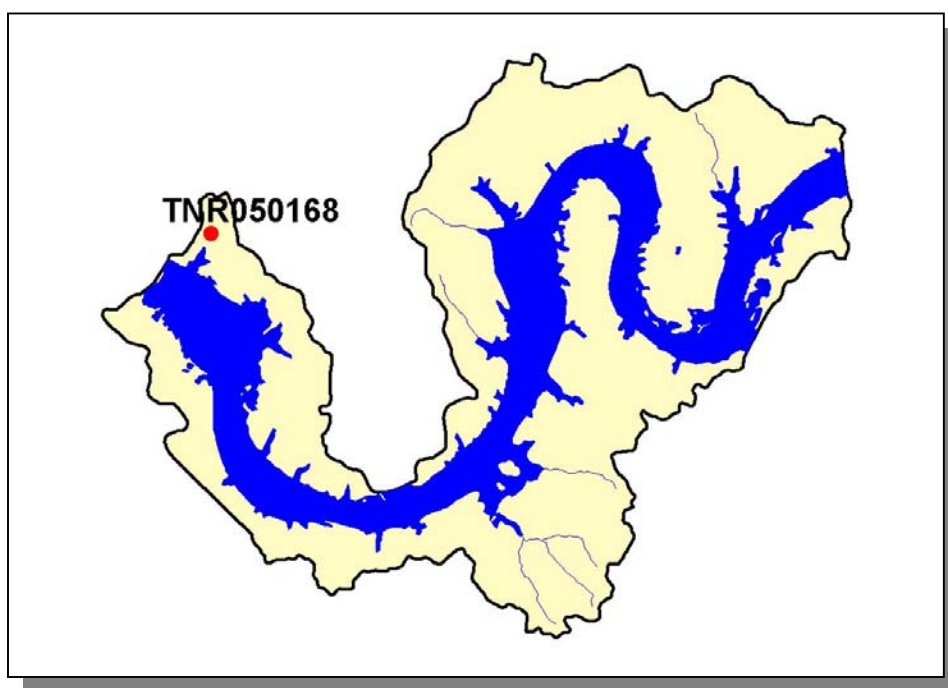
**Figure 4-138. Location of Permitted Herbicide Application Sites in Subwatershed 051302010405.** More information is provided in Appendix IV.



**Figure 4-139. Location of Water Treatment Plants in Subwatershed 051302010405.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-140. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 051302010405.** More information is provided in Appendix IV.



**Figure 4-141. Location of TMSP Sites in Subwatershed 051302010405.** More information, including the names of facilities, is provided in Appendix IV.

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**4.2.D.v.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
807	1,762	51	<5	78	9

**Table 4-109. Summary of Livestock Count Estimates in Subwatershed 051302010405.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Davidson	0	9,207	0	1,572	73	0
Sumner	22,296	45,116	1,515	50	2,500	189
Wilson	27,209	51,090	1,505	1,585	1,700	465

**Table 4-110. Summary of Livestock Count Estimates in Davidson, Sumner and Wilson Counties.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Davidson	108.7	108.1	2.3	9.7
Sumner	88.2	88.2	2.0	6.3
Wilson	98.1	97.0	1.7	6.8

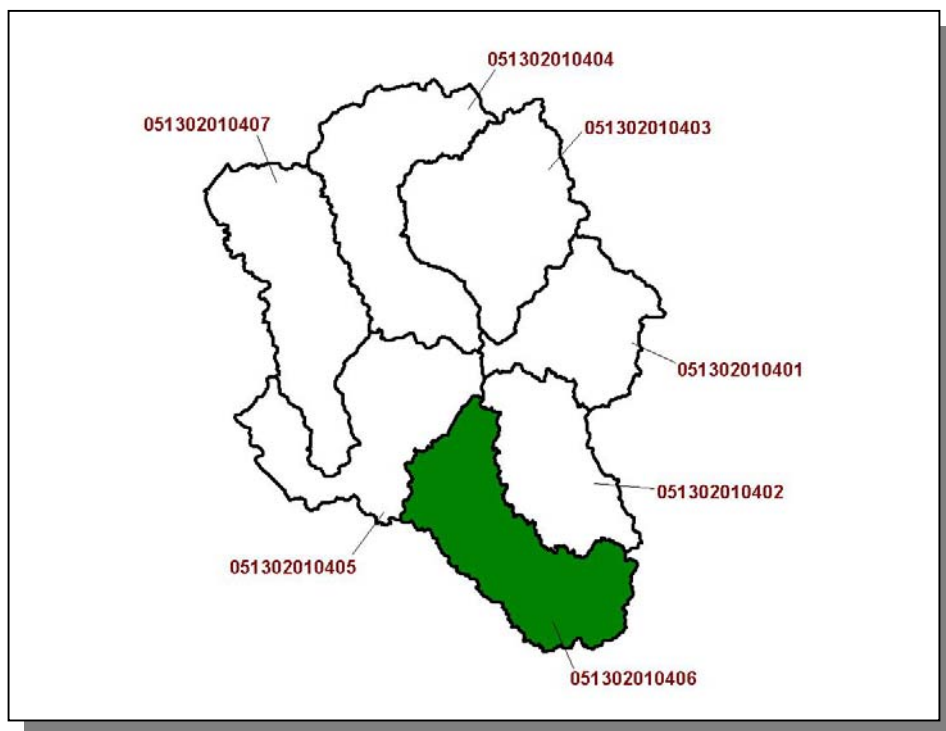
**Table 4-111. Forest Acreage and Annual Removal Rates (1987-1994) in Davidson, Sumner, and Wilson Counties.**

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<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Grass (Pastureland)	0.45
Grass (Hayland)	0.30
Legumes, Grass (Hayland)	0.28
Legumes (Hayland)	0.12
Grass, Forbs, Legumes (Mixed Pasture)	0.64
Corn (Row Crops)	9.13
Soybeans (Row Crops)	10.51
Tobacco (Row Crops)	19.23
Wheat (Close-Grown Cropland)	1.96
All Other Close-Grown Cropland	2.42
Other Cropland not Planted	19.23
Conservation Reserve Program Lands	0.26
Farmsteads and Ranch Headquarters	0.32

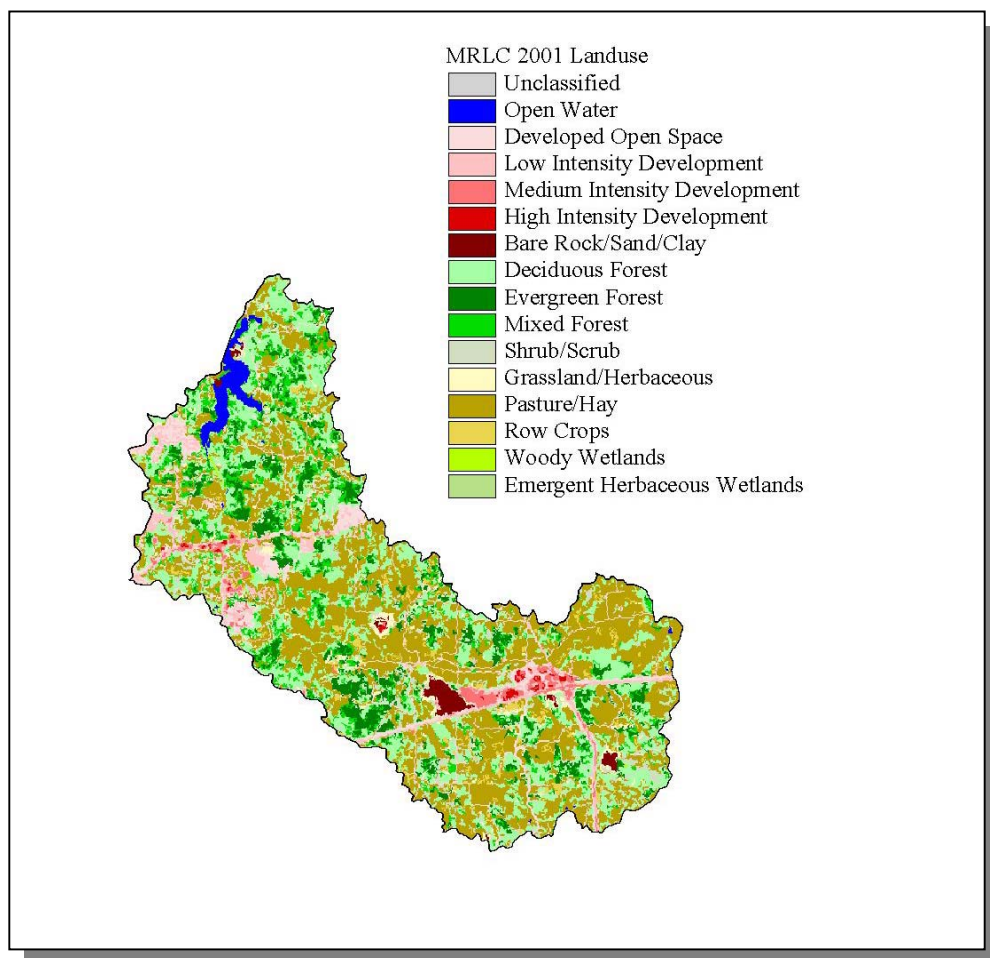
**Table 4-112. Annual Estimated Total Soil Loss in Subwatershed 051302010405.**

**4.2.D.vi. 051302010406 (Cedar Creek).**



**Figure 4-142. Location of Subwatershed 051302010406.** All HUC-12 subwatershed boundaries are shown for reference.

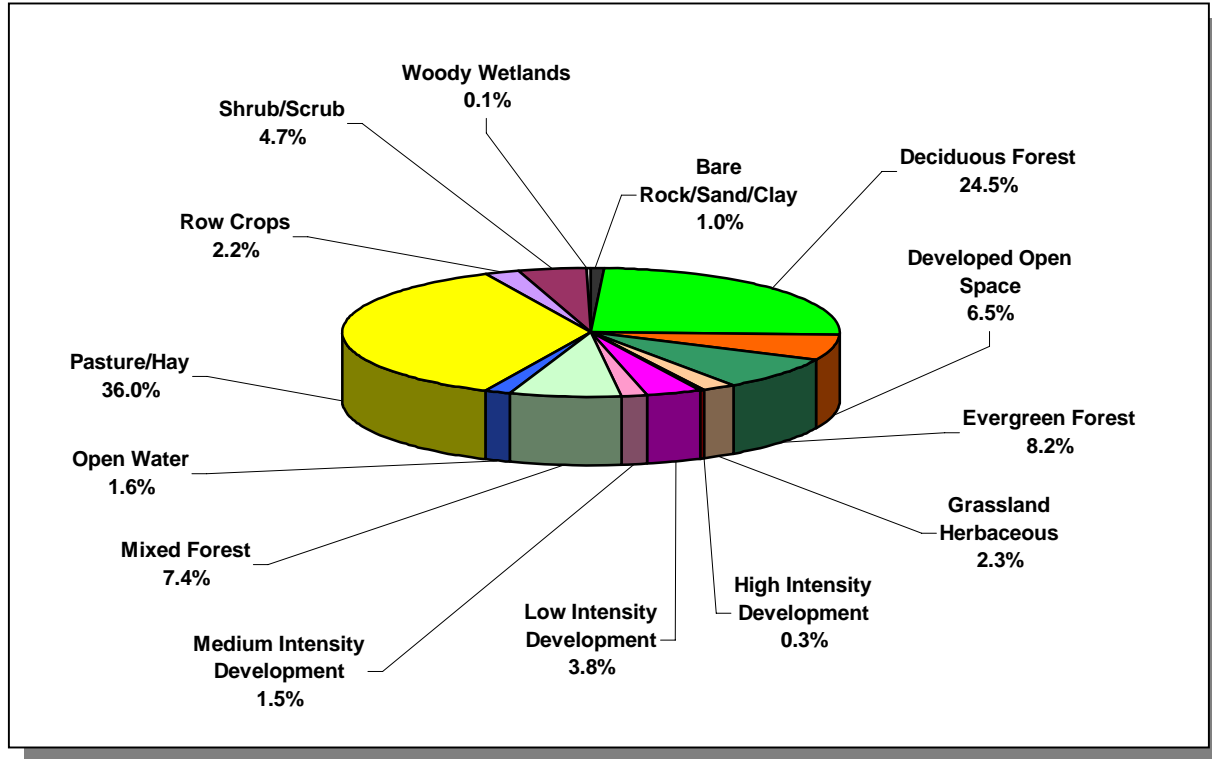
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**Figure 4-143. Illustration of Land Use Distribution in Subwatershed 051302010406.**

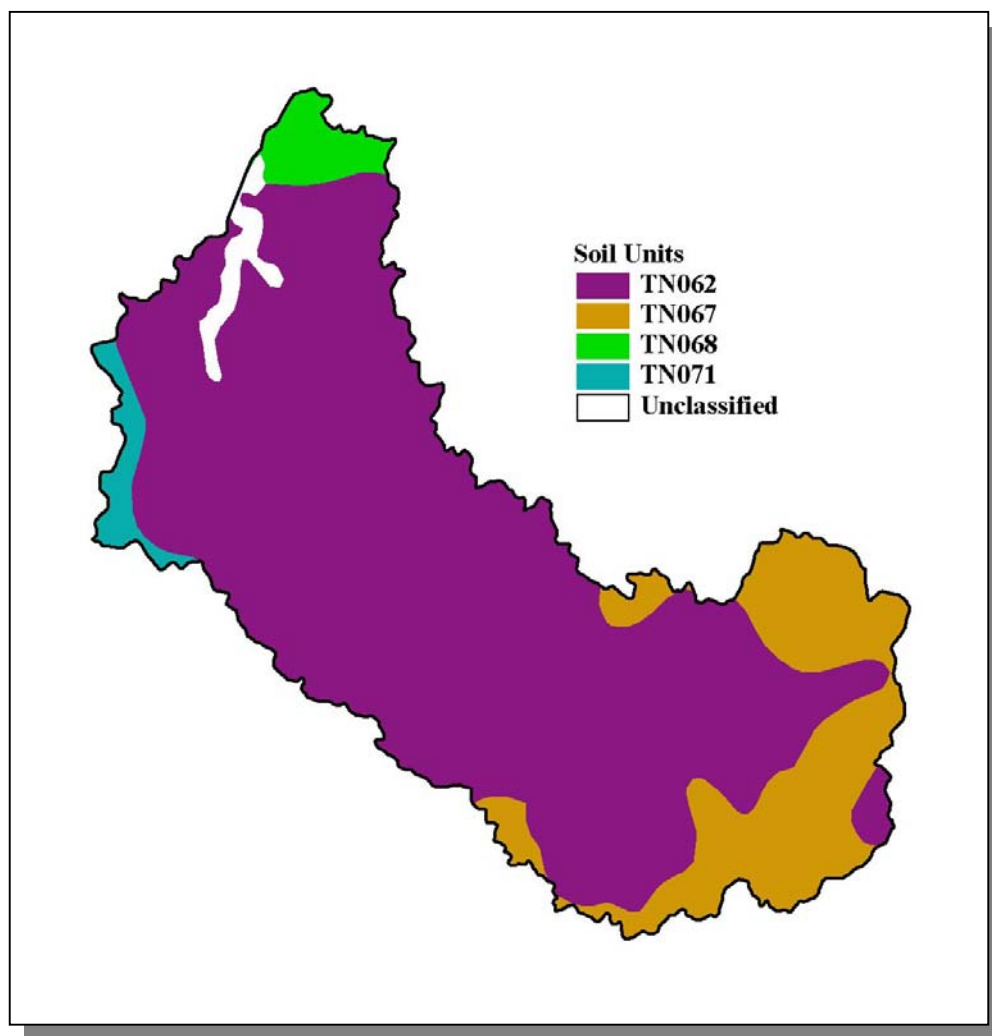


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**Figure 4-144. Land Use Distribution in Subwatershed 051302010406.** More information is provided in Appendix IV.

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**Figure 4-145. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010406.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN062	0.00	C	0.98	4.40	Clayey Loam	0.26
TN067	2.00	C	2.69	5.51	Silty Loam	0.35
TN068	0.00	B	1.35	5.38	Silty Loam	0.37
TN071	0.00	C	2.37	5.70	Silty Loam	0.33

**Table 4-113. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010406.** The definition of “Hydrologic Group” is provided in Appendix IV.

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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Sumner	103,281	121,936	130,449	0.01	10	12	13	30.0

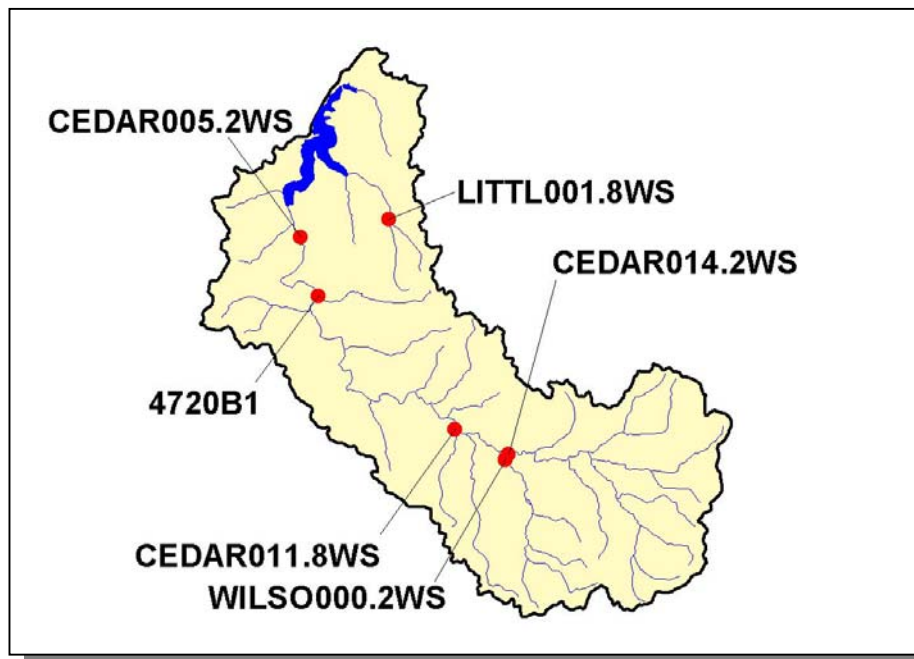
**Table 4-114. Population Estimates in Subwatershed 051302010406.**

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Lebanon	Wilson	15,208	6,592	5,440	1,137	15
Mount Juliet	Wilson	5,389	1,926	1,265	661	0
<b>Total</b>		<b>20,597</b>	<b>8,518</b>	<b>6,705</b>	<b>1,798</b>	<b>15</b>

**Table 4-115. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051302010406.**

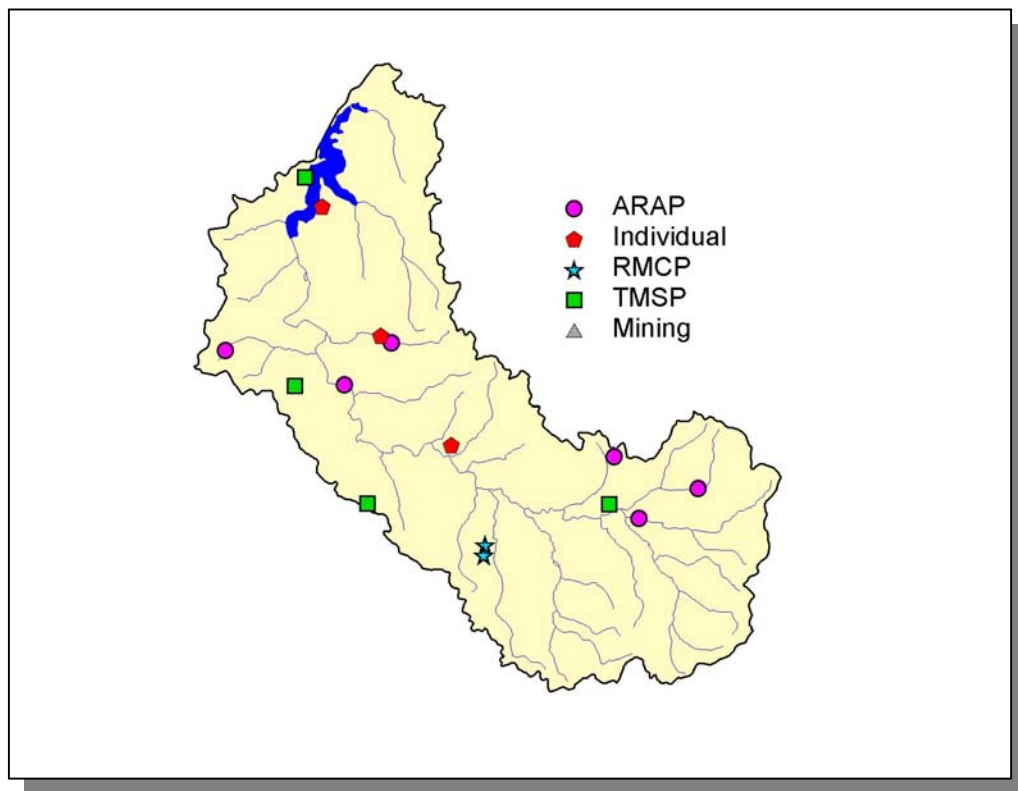


**Figure 4-146. Location of Historical Streamflow Data Collection Sites in Subwatershed 051302010406.** More information is provided in Appendix IV.

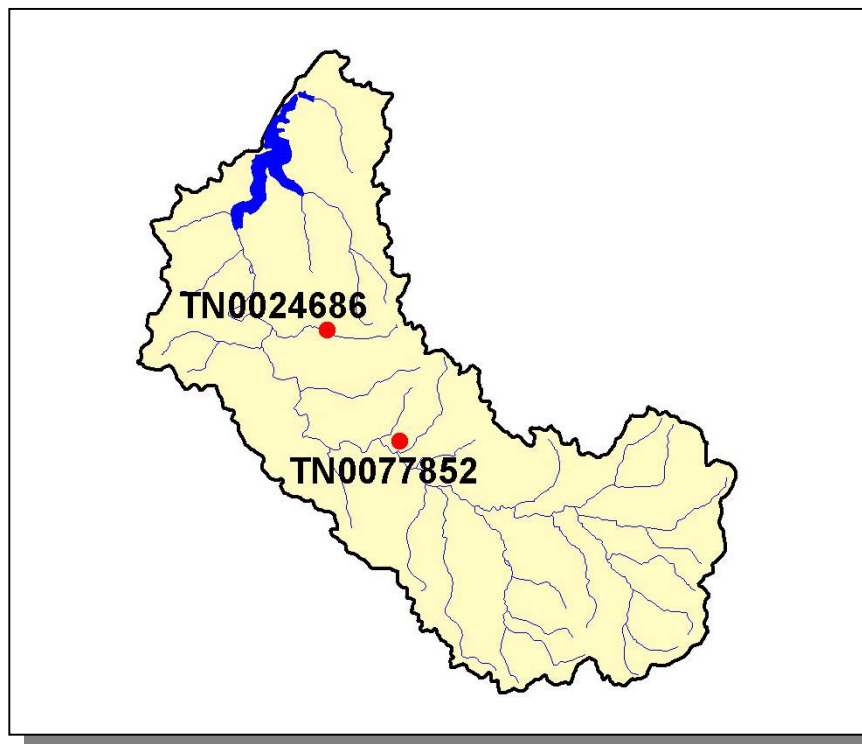


**Figure 4-147. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010406.** More information, including site names and locations, is provided in Appendix IV.

**4.2.D.vi.a. Point Source Contributions.**



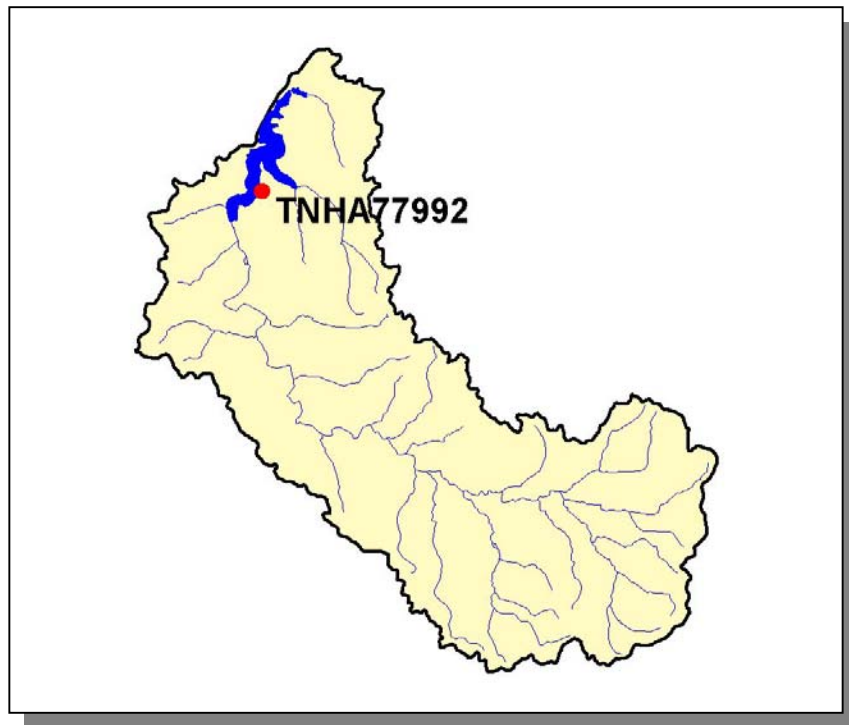
**Figure 4-148. Location of Permits Issued in Subwatershed 051302010406.** More information, including the names of facilities, is provided in Appendix IV.



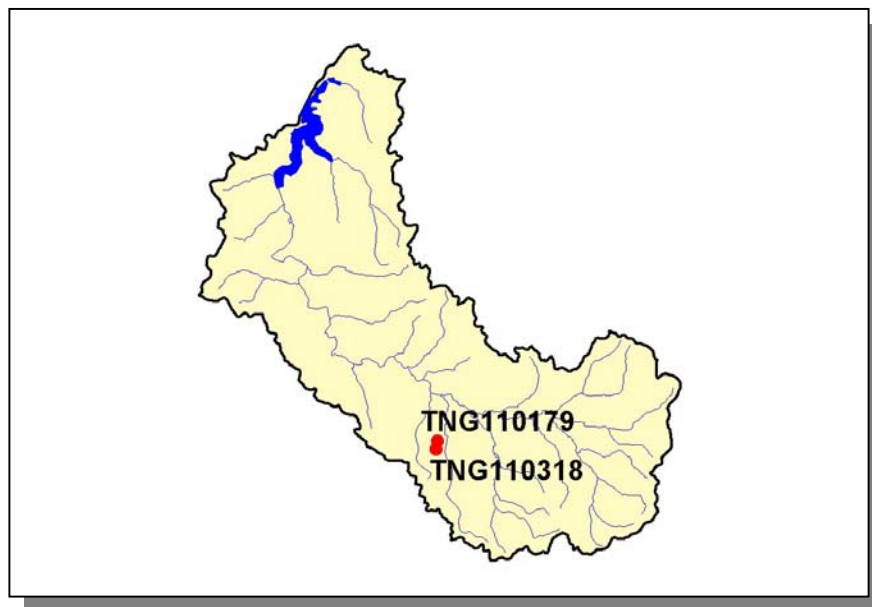
**Figure 4-149. Location of Active NPDES Sites in Subwatershed 051302010406.** More information, including the names of facilities, is provided in Appendix IV.



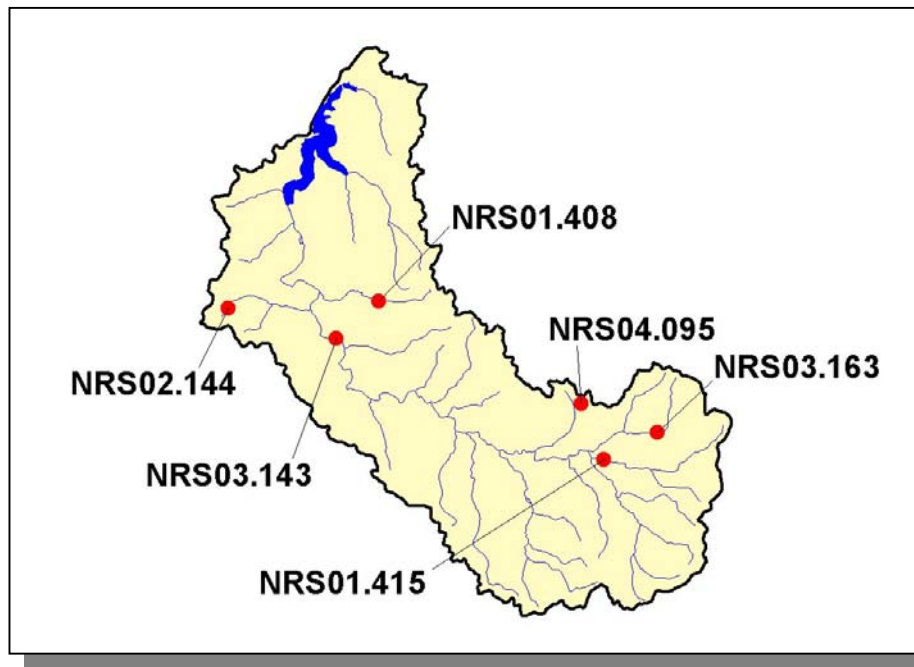
**Figure 4-150. Location of Active Mining Sites in Subwatershed 051302010406.** More information, including the names of mining operations, is provided in Appendix IV.



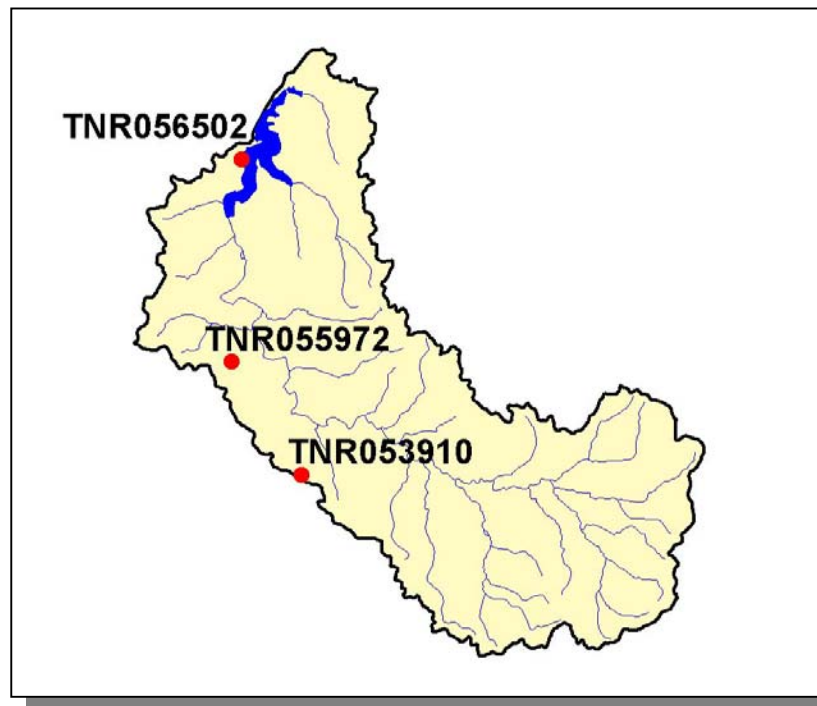
**Figure 4-151. Location of Permitted Herbicide Application Sites in Subwatershed 051302010406.** More information is provided in Appendix IV.



**Figure 4-152. Location of Ready Mix Concrete Plants (RMCP) in Subwatershed 051302010406.** More information is provided in Appendix IV.



**Figure 4-153. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 051302010406.** More information is provided in Appendix IV.



**Figure 4-154. Location of TMSP Sites in Subwatershed 051302010406.** More information, including the names of facilities, is provided in Appendix IV.



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**4.2.D.vi.b. Nonpoint Source Contributions.**

<b>LIVESTOCK COUNTS</b>					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
1,785	3,351	99	6	112	31

**Table 4-116. Summary of Livestock Count Estimates in Subwatershed 051302010406.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

<b>LIVESTOCK COUNTS</b>						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Sumner	22,296	45,116	1,515	50	2,500	189
Wilson	27,209	51,090	1,505	1,585	1,700	465

**Table 4-117. Summary of Livestock Count Estimates in Sumner and Wilson Counties.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

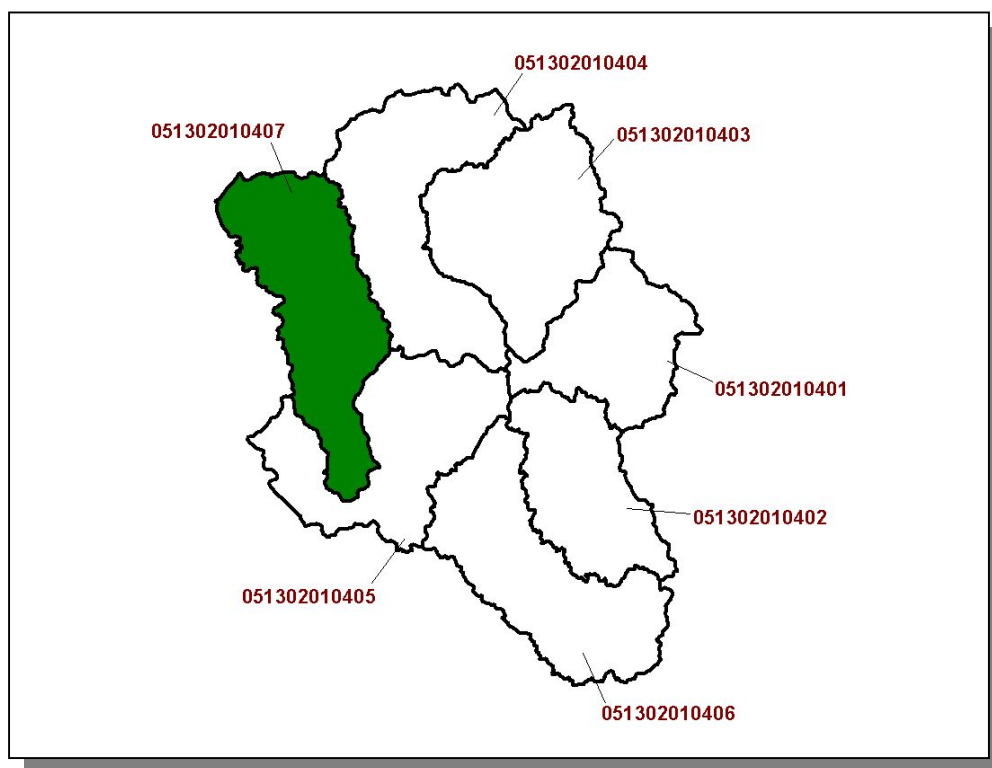
County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Sumner	88.2	88.2	2.0	6.3
Wilson	98.1	97.0	1.7	6.8

**Table 4-118. Forest Acreage and Annual Removal Rates (1987-1994) in Sumner and Wilson Counties.**

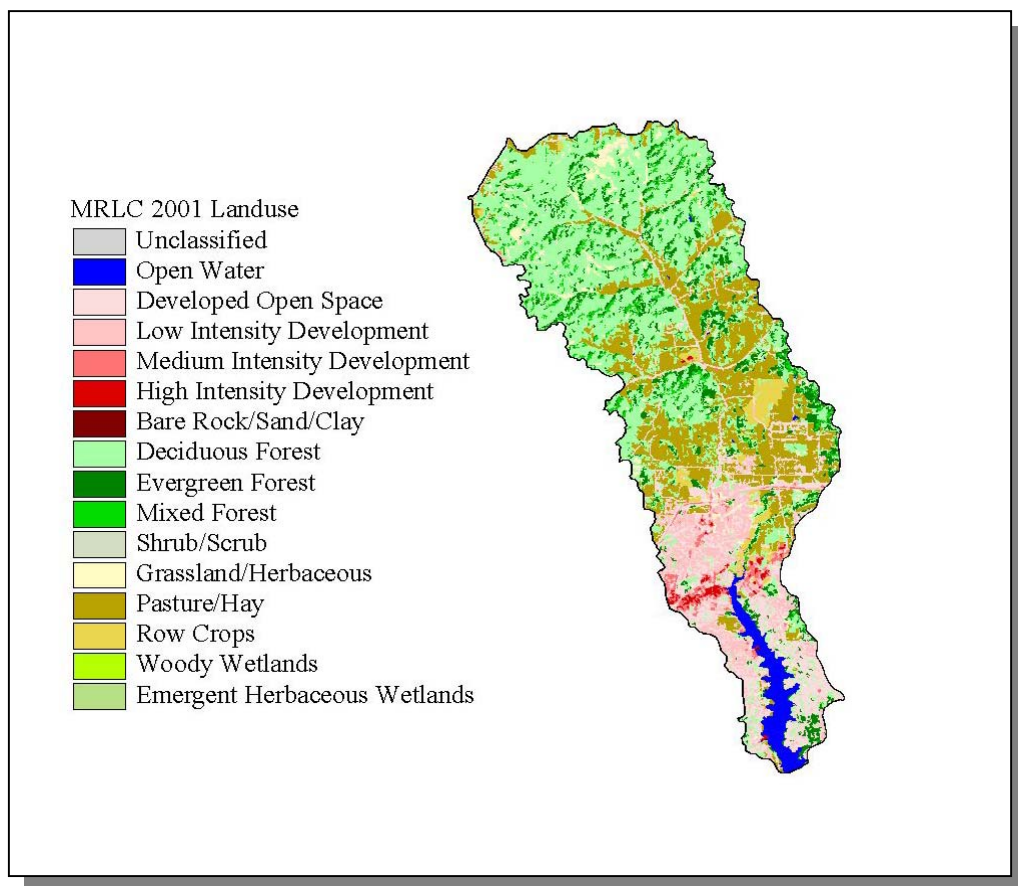
<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Grass (Pastureland)	0.42
Grass (Hayland)	0.37
Legumes, Grass (Hayland)	0.37
Legumes (Hayland)	0.12
Grass, Forbs, Legumes (Mixed Pasture)	0.91
Corn (Row Crops)	2.24
Soybeans (Row Crops)	6.73
Tobacco (row Crops)	19.23
Wheat (Close-Grown Cropland)	1.96
All Other Close-Grown Cropland	2.49
Other Cropland not Planted	19.23
Conservation Reserve Program Lands	0.26
Farmsteads and Ranch Headquarters	0.26

**Table 4-119. Annual Estimated Total Soil Loss in Subwatershed 051302010406.**

**4.2.D.vii. 051302010407 (Drakes Creek).**

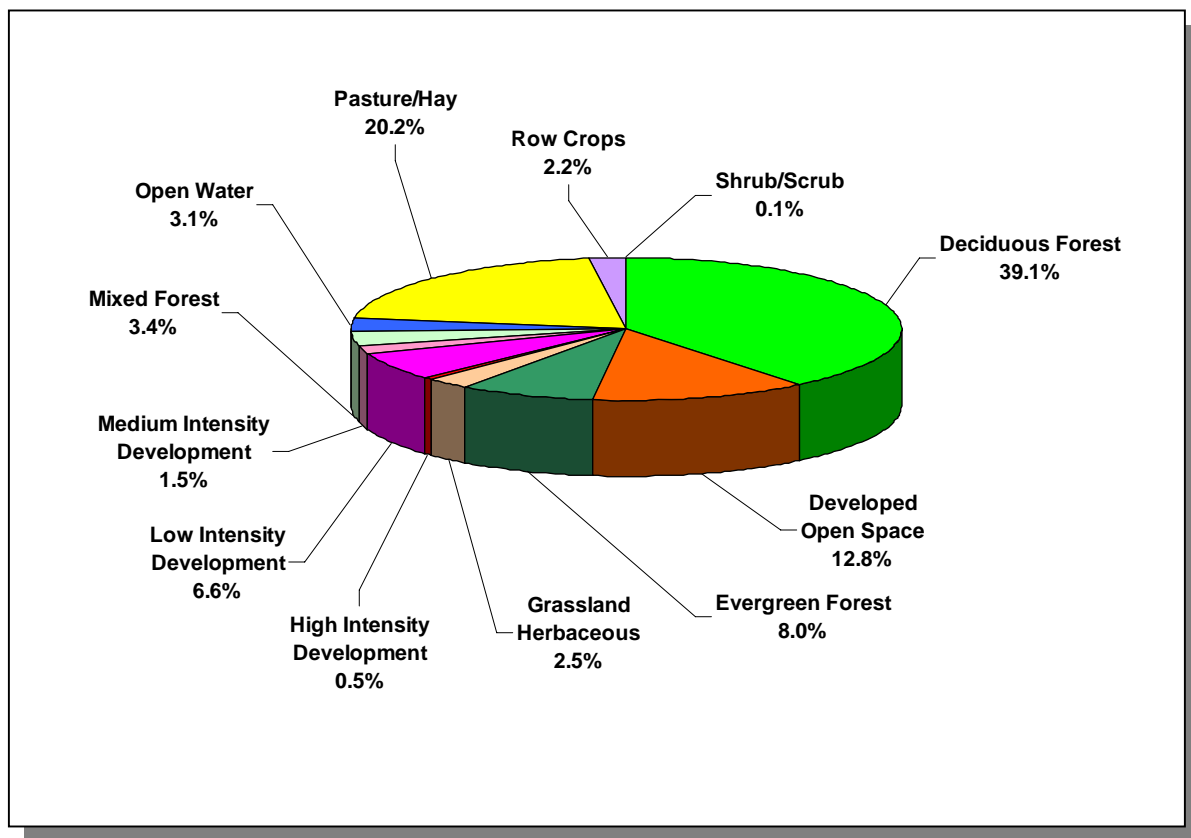


**Figure 4-155. Location of Subwatershed 051302010407.** All HUC-12 subwatershed boundaries are shown for reference.



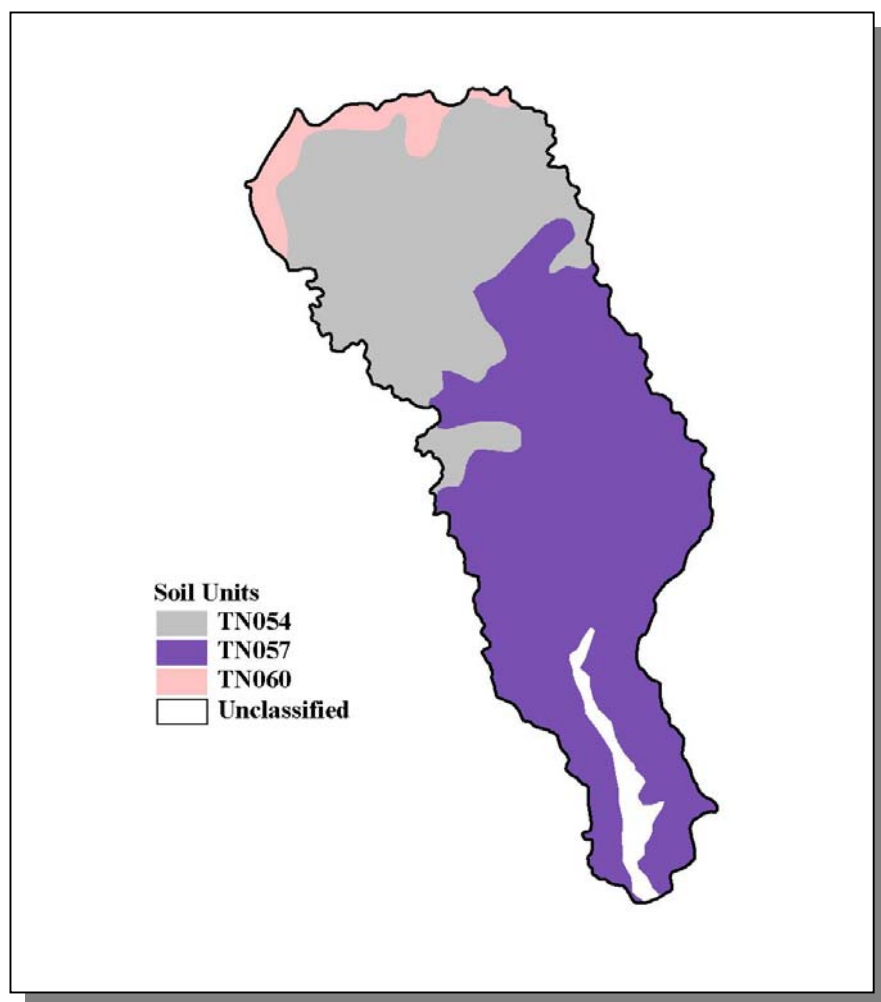
**Figure 4-156. Illustration of Land Use Distribution in Subwatershed 051302010407.**

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**Figure 4-157. Land Use Distribution in Subwatershed 051302010407.** More information is provided in Appendix IV.

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**Figure 4-158. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010407.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN054	0.00	C	3.04	4.84	Loam	0.32
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN060	5.00	B	1.30	5.32	Silty Loam	0.39

**Table 4-120. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010407.** The definition of "Hydrologic Group" is provided in Appendix IV.

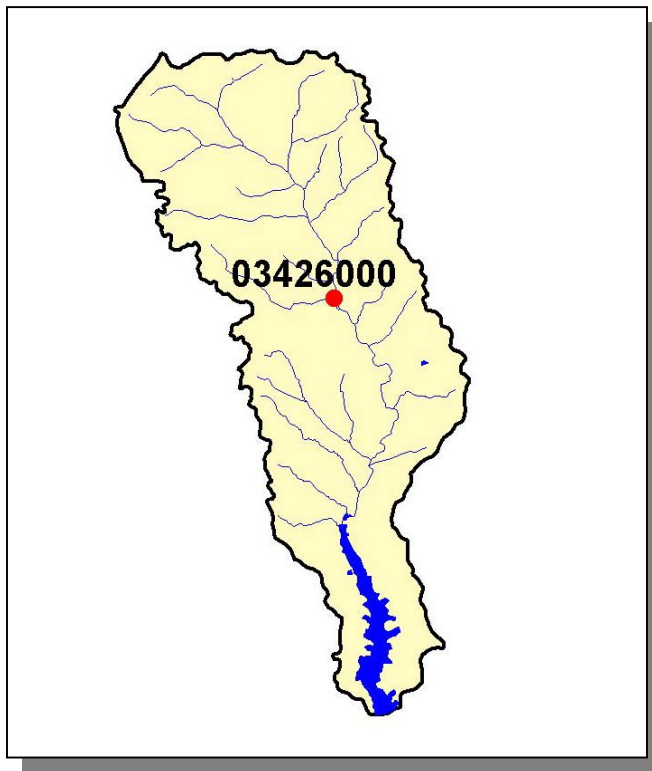
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Robertson	41,494	51,533	54,433	0.02	9	11	11	22.2
Sumner	103,281	121,936	130,449	8.14	8,410	9,929	10,622	26.3
<b>Total</b>	<b>144,775</b>	<b>173,469</b>	<b>184,882</b>		<b>8,419</b>	<b>9,940</b>	<b>10,633</b>	<b>26.3</b>

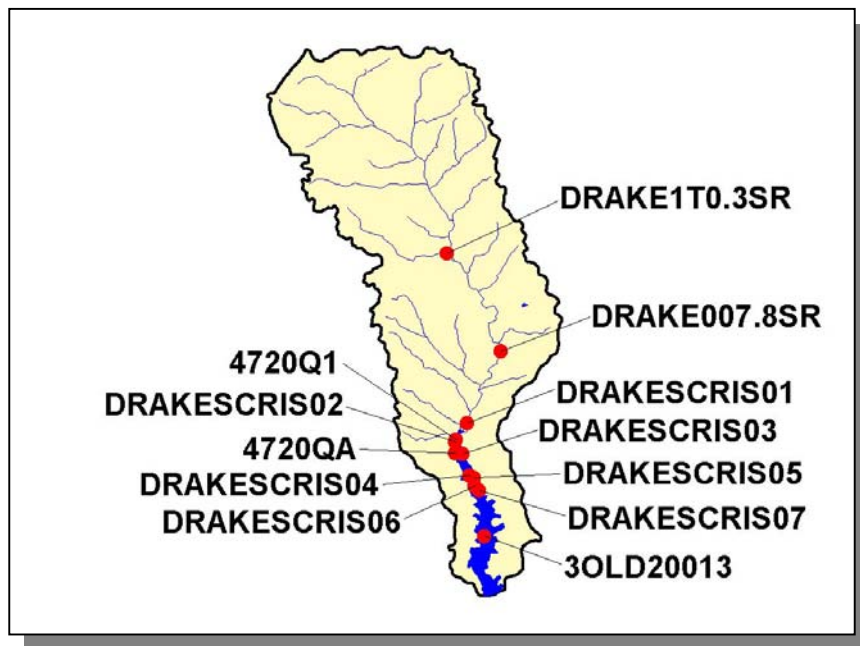
*Table 4-121. Population Estimates in Subwatershed 051302010407.*

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Hendersonville	Sumner	32,188	12,472	8,395	4,069	8
Millersville	Sumner	2,544	1,033	849	180	4
Whitehouse	Robertson	3,025	1,130	991	136	3
<b>Total</b>		<b>37,757</b>	<b>14,635</b>	<b>10,235</b>	<b>4,385</b>	<b>15</b>

*Table 4-122. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051302010407.*

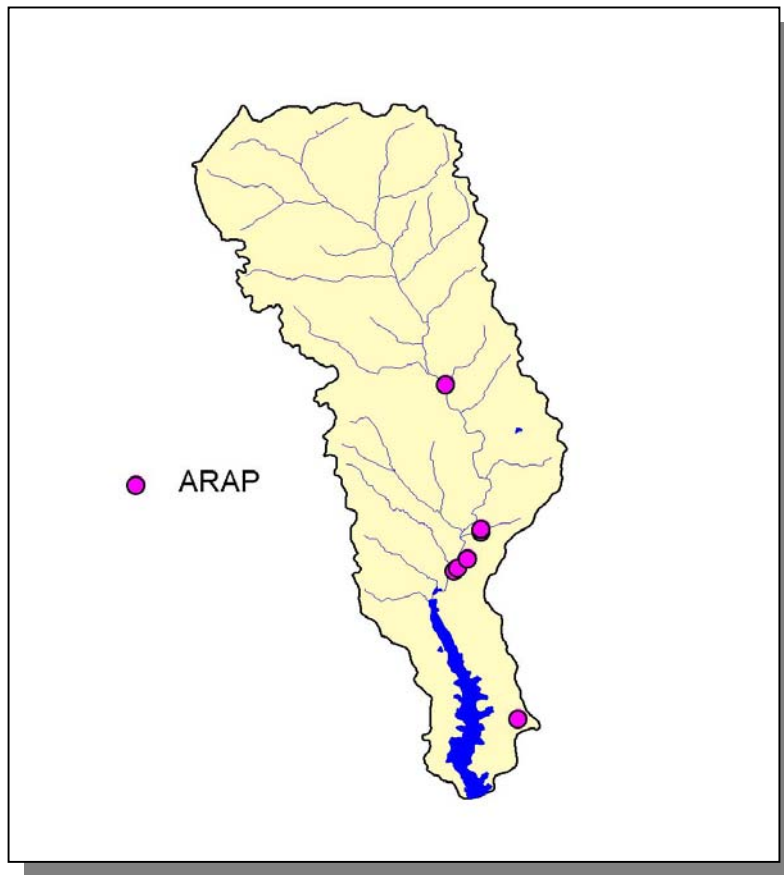


**Figure 4-159. Location of Historical Streamflow Data Collection Sites in Subwatershed 051302010407.** More information is provided in Appendix IV.



**Figure 4-160. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010407.** More information, including site names and locations, is provided in Appendix IV.

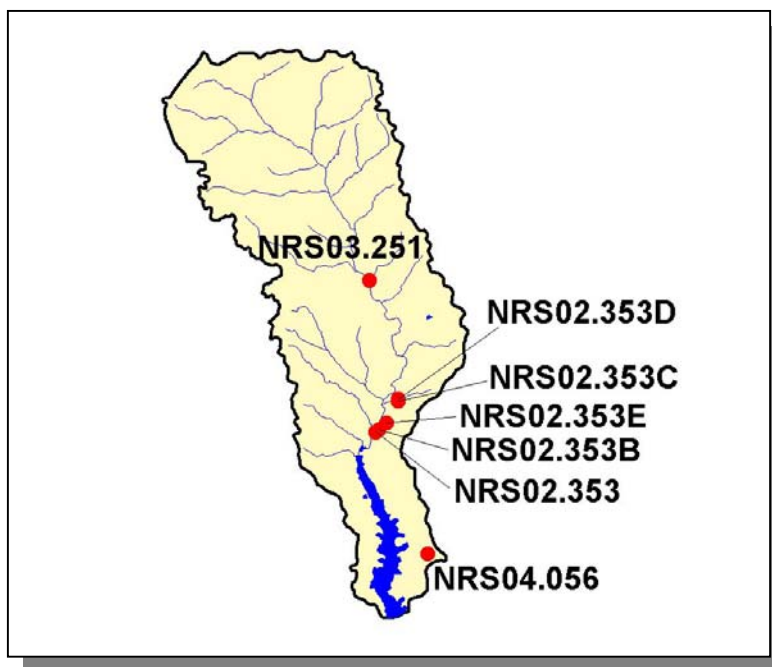
**4.2.D.vii.a. Point Source Contributions.**



**Figure 4-161. Location of Permits Issued in Subwatershed 051302010407.** More information, including the names of facilities, is provided in Appendix IV.



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**Figure 4-162. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 051302010407. More information is provided in Appendix IV.**

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**4.2.D.vii.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
1,372	2,778	94	<5	156	12

**Table 4-123. Summary of Livestock Count Estimates in Subwatershed 051302010407.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Robertson	22,502	47,887	3,478	31	6,982	279
Sumner	22,296	45,116	1,515	50	2,500	189

**Table 4-124. Summary of Livestock Count Estimates in Robertson, and Sumner Counties.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

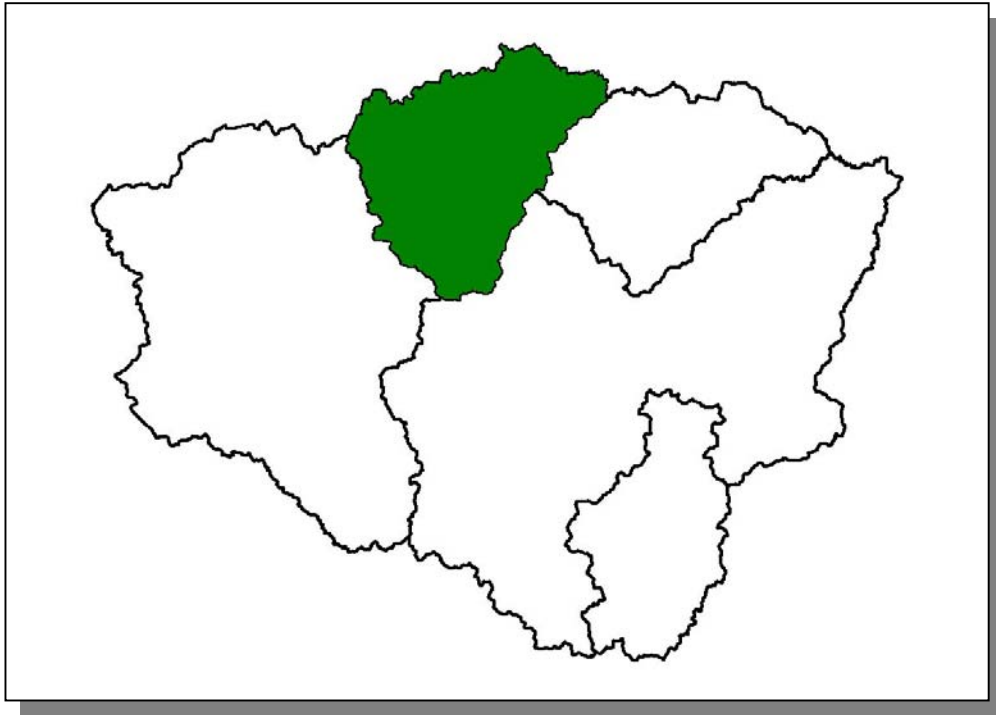
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Robertson	53.0	53.0	2.2	9.7
Sumner	88.2	88.2	2.0	6.3

**Table 4-125. Forest Acreage and Annual Removal Rates (1987-1994) in Robertson and Sumner Counties.**

CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.46
Grass (Hayland)	0.31
Legumes, Grass (Hayland)	0.23
Legumes (Hayland)	0.12
Grass, Forbs, Legumes (Mixed Pasture)	0.54
Corn (Row Crops)	12.30
Soybeans (Row Crops)	11.27
Tobacco (Row Crops)	11.87
Wheat (Close-Grown Cropland)	1.68
Other Cropland not Planted	19.21
Conservation Reserve Program Lands	0.26
Other Land in Farms	0.27
Farmsteads and Ranch Headquarters	0.34

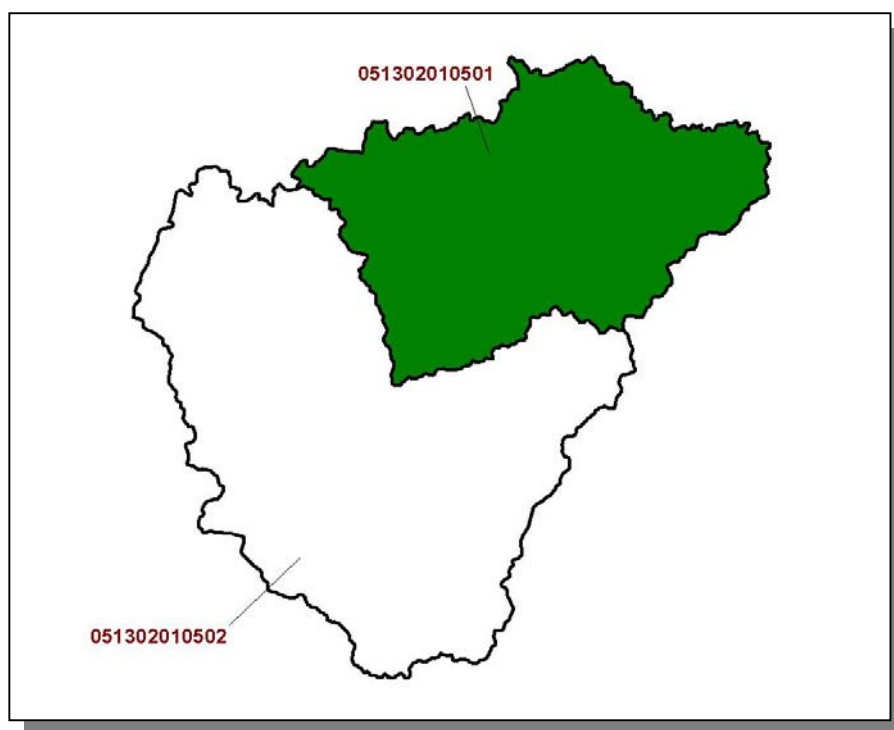
**Table 4-126. Annual Estimated Total Soil Loss in Subwatershed 051302010407.**

**4.2.E. 0513020105.**

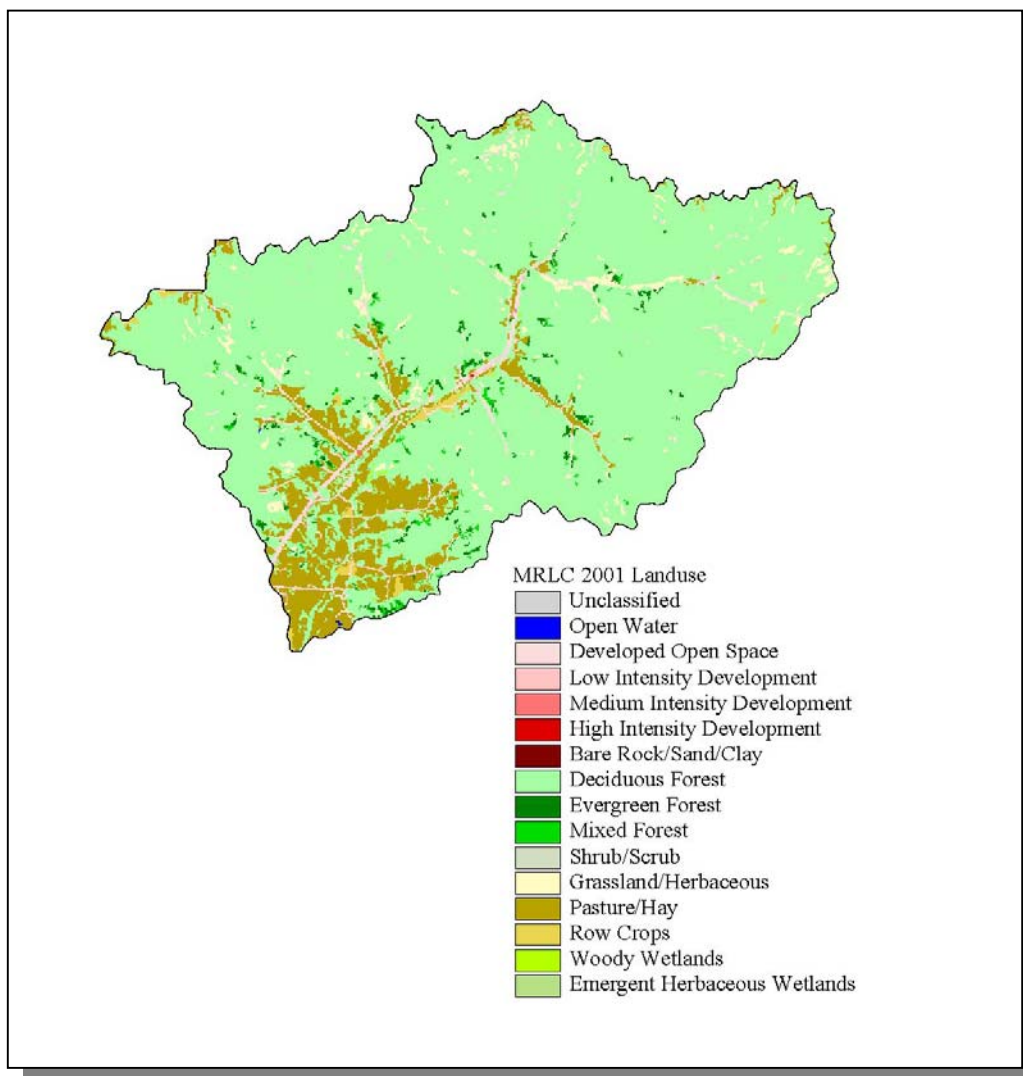


**Figure 4-163. Location of Subwatershed 0513020105.** All Old Hickory Lake HUC-10 subwatershed boundaries are shown for reference.

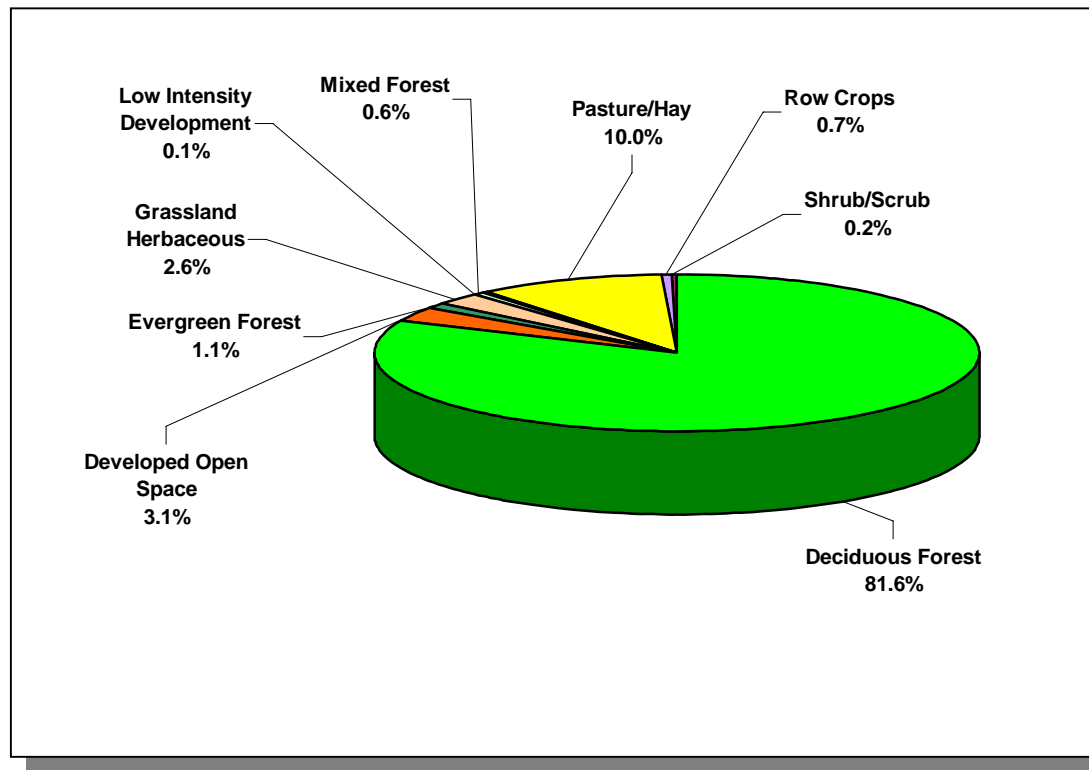
**4.2.E.i. 051302010501 (Upper Bledsoe Creek).**



**Figure 4-164. Location of Subwatershed 051302010501.** All HUC-12 subwatershed boundaries are shown for reference.

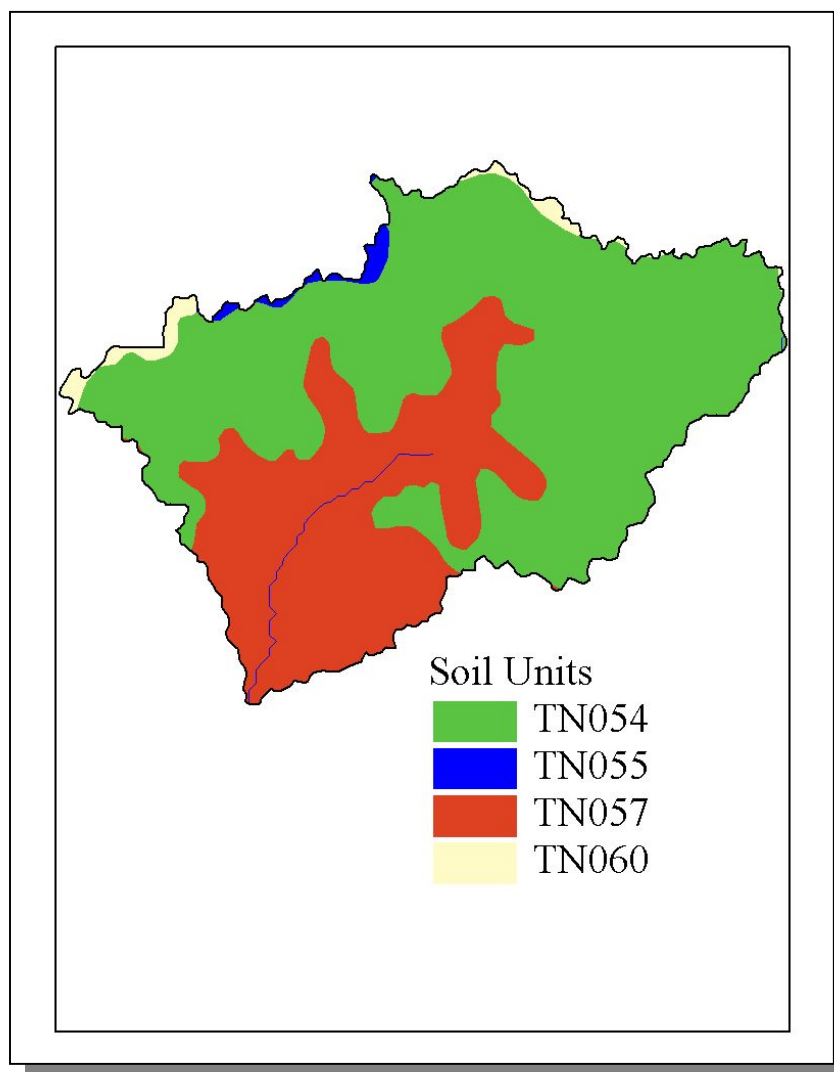


**Figure 4-165. Illustration of Land Use Distribution in Subwatershed 051302010501.**



**Figure 4-166. Land Use Distribution in Subwatershed 051302010501.** More information is provided in Appendix IV.

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**Figure 4-167. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010501.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN054	0.00	C	3.04	4.84	Loam	0.32
TN055	3.00	C	2.45	5.24	Loam	0.34
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN060	5.00	B	1.30	5.32	Silty Loam	0.39

**Table 4-127. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010501.** The definition of "Hydrologic Group" is provided in Appendix IV.

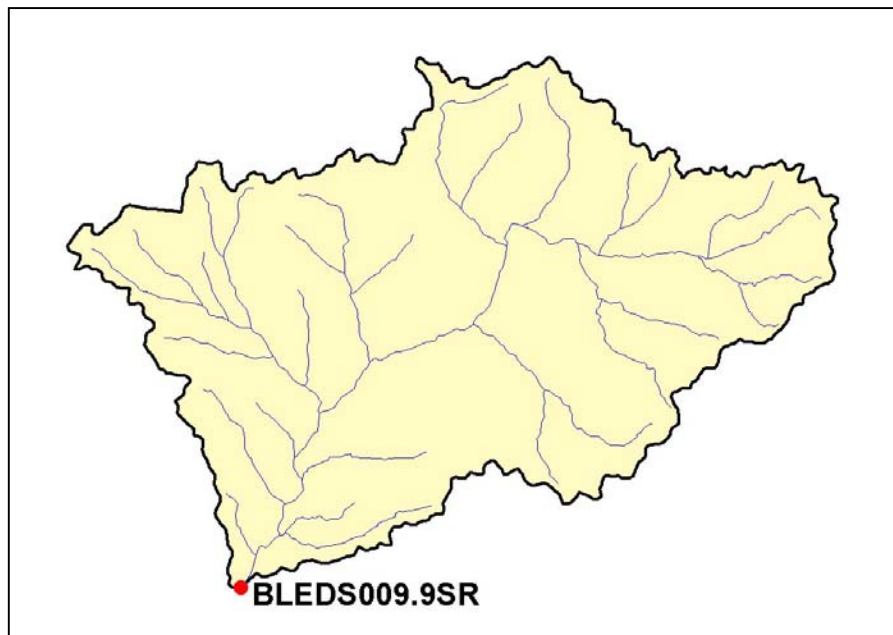
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Macon	15,906	17,854	20,386	1.24	197	222	253	28.4
Sumner	103,281	121,936	130,449	7.23	7,466	8,815	9,431	26.3
Trousdale	5,920	6,748	7,259	1.00	59	67	73	23.7
<b>Total</b>	<b>125,107</b>	<b>146,538</b>	<b>158,094</b>		<b>7,722</b>	<b>9,104</b>	<b>9,757</b>	<b>26.4</b>

*Table 4-128. Population Estimates in Subwatershed 051302010501.*

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Westmoreland	Sumner	1,726	709	625	82	2

*Table 4-129. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051302010501.*



*Figure 4-168. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010501. More information, including site names and locations, is provided in Appendix IV.*



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**4.2.E.i.a. Point Source Contributions.**

There are no point source contributions in this subwatershed.

**4.2.E.i.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
740	1,484	48	<5	85	6

**Table 4-130. Summary of Livestock Count Estimates in Subwatershed 051302010501.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Macon	15,039	26,098	318	675	2,377	111
Sumner	22,296	45,116	1,515	50	2,500	189
Trousdale	6,672	11,344	135	243	112	195

**Table 4-131. Summary of Livestock Count Estimates in Macon, Sumner, and Trousdale Counties.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Macon				
Sumner	88.2	88.2	2.0	6.3
Trousdale	30.0	30.0	0.1	0.4

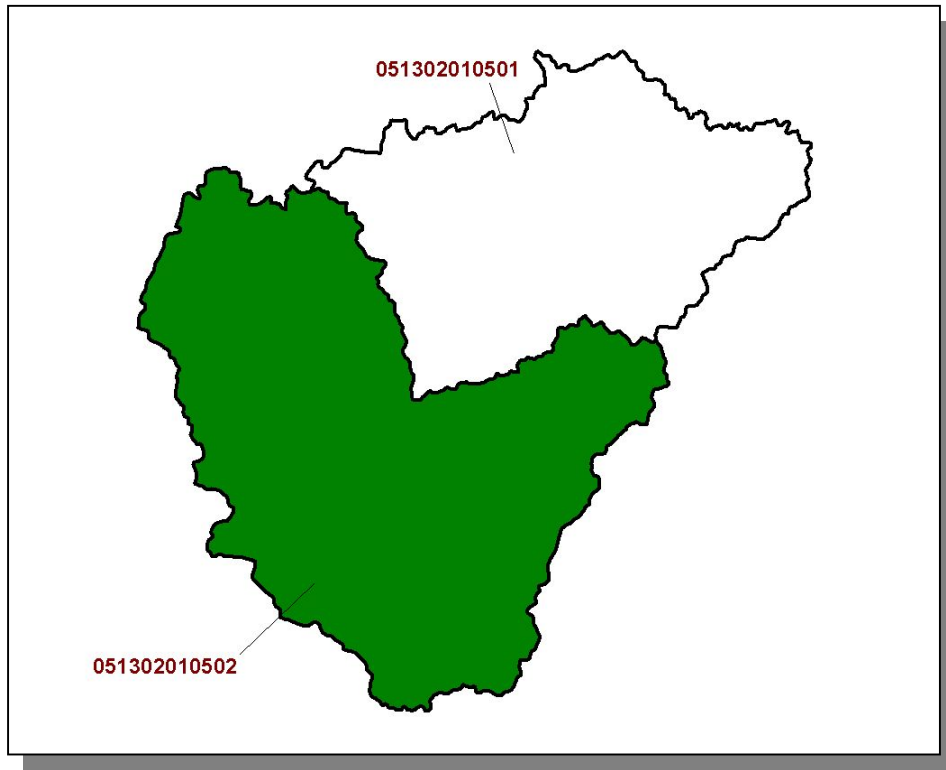
**Table 4-132. Forest Acreage and Annual Removal Rates (1987-1994) in Macon, Sumner, and Trousdale Counties.**

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<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Legumes (Pastureland)	0.15
Grass (Pastureland)	0.46
Grass (Hayland)	0.30
Legumes, Grass (Hayland)	0.23
Grass, Forbs, Legumes (Mixed Pasture)	0.58
Legumes (Hayland)	0.12
Corn (Row Crops)	11.58
Soybeans (Row Crops)	11.27
Tobacco (Row Crops)	10.06
Wheat (Close-Grown Cropland)	3.43
Other Vegetable and Truck Crops	5.48
Other Cropland not Planted	19.23
Conservation Reserve Program Lands	0.26
Farmsteads and Ranch Headquarters	0.32

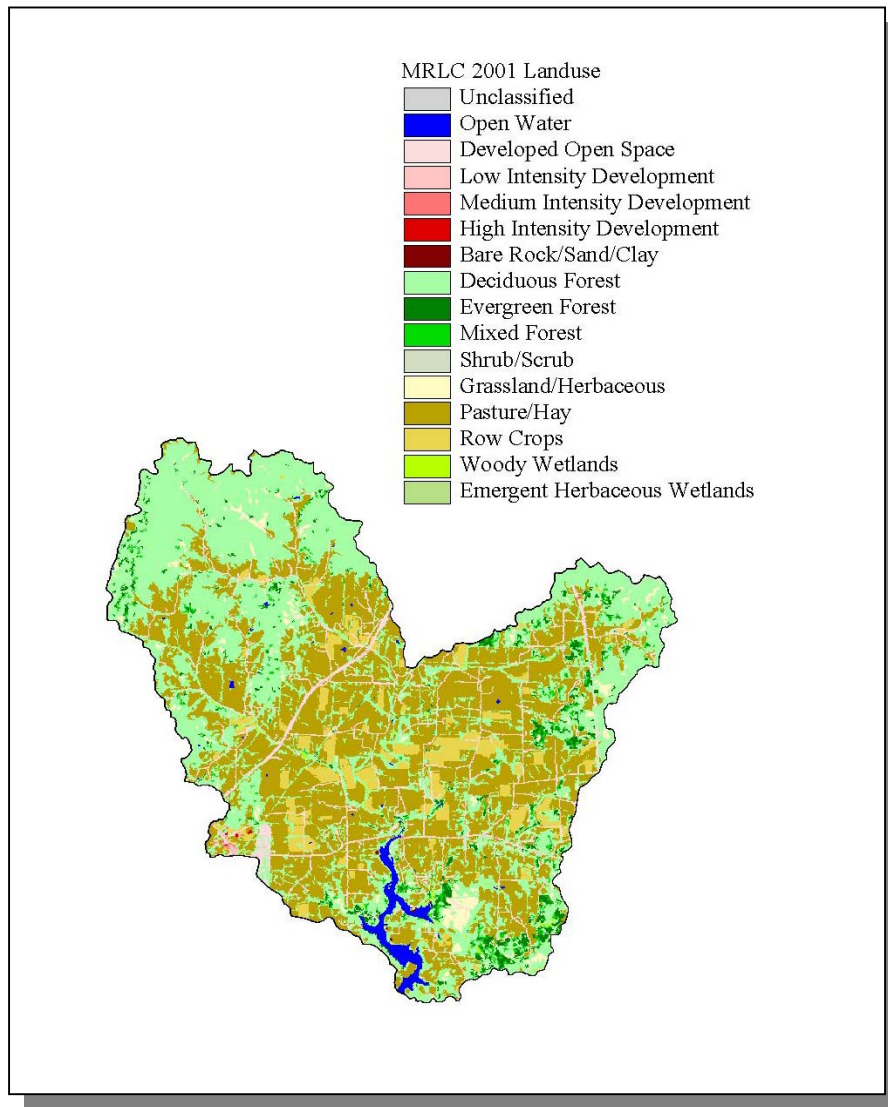
**Table 4-133. Annual Estimated Total Soil Loss in Subwatershed 051302010501.**

**4.2.E.ii. 051302010502 (Lower Bledsoe Creek).**

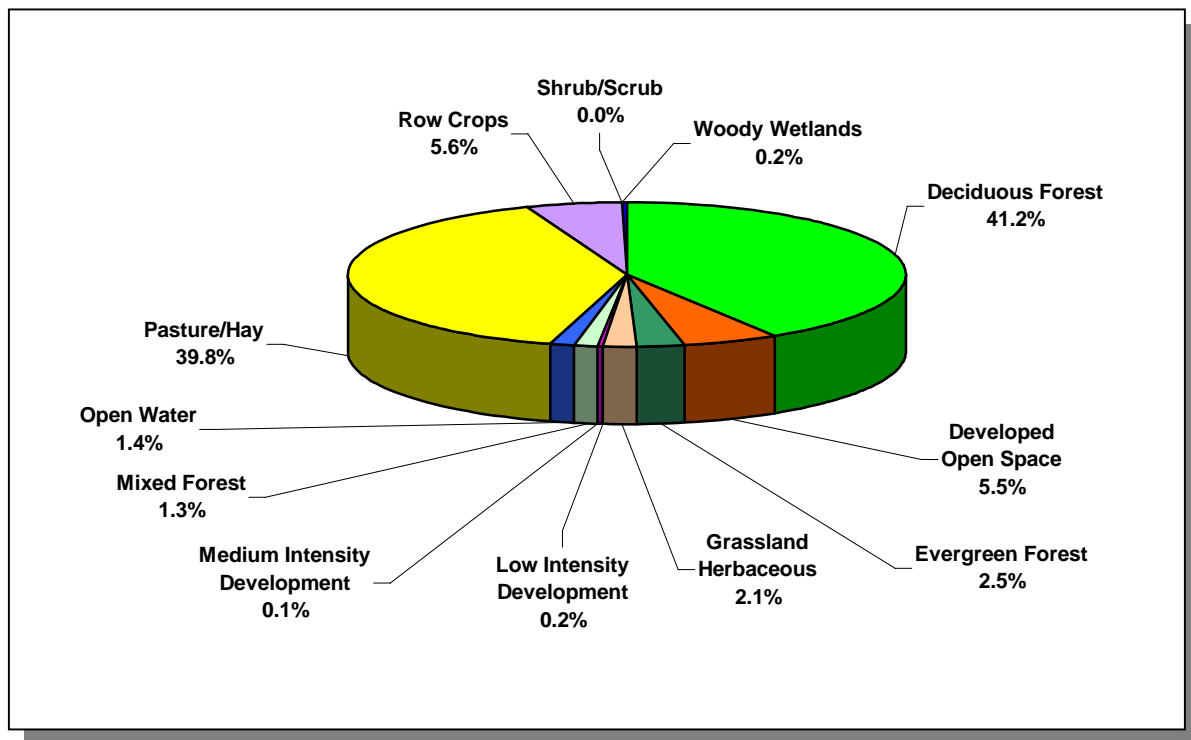


**Figure 4-169. Location of Subwatershed 051302010502.** All HUC-12 subwatershed boundaries are shown for reference.

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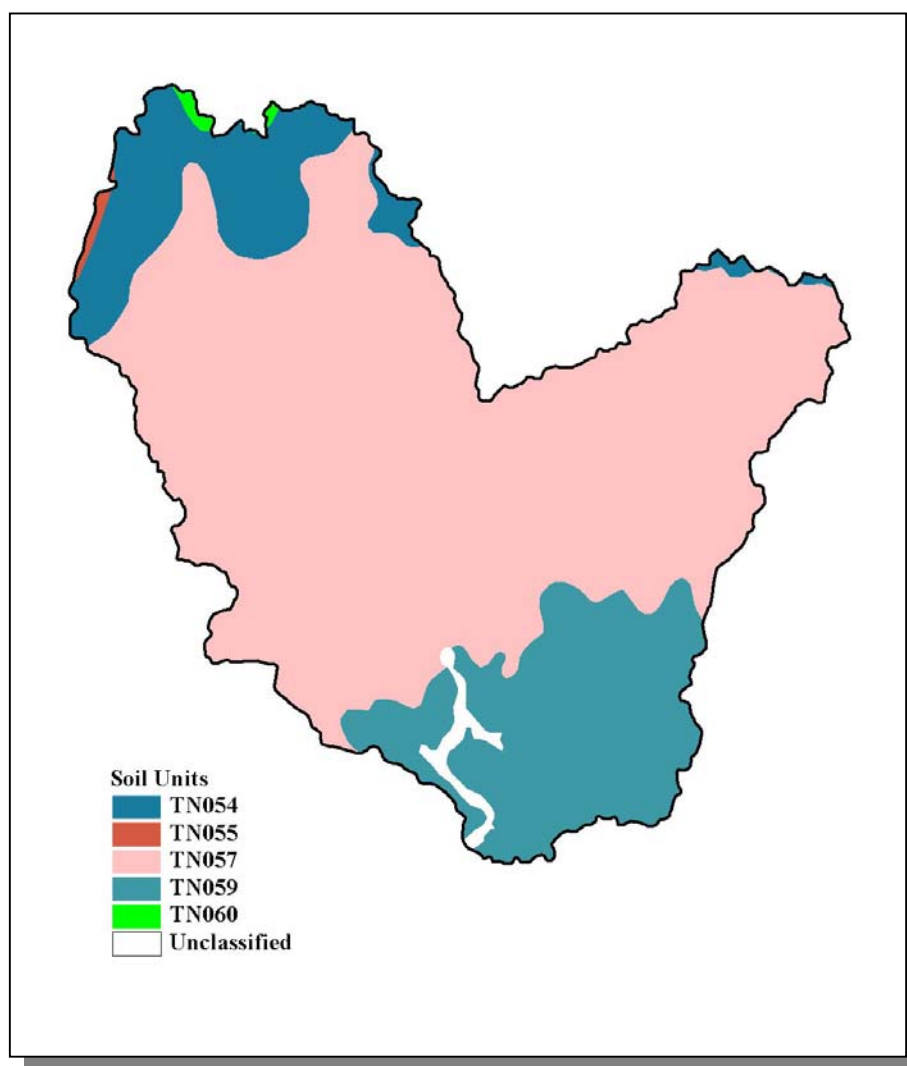


**Figure 4-170. Illustration of Land Use Distribution in Subwatershed 051302010502.**



**Figure 4-171. Land Use Distribution in Subwatershed 051302010502.** More information is provided in Appendix IV.

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**Figure 4-172. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010502.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN054	0.00	C	3.04	4.84	Loam	0.32
TN055	3.00	C	2.45	5.24	Loam	0.34
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN059	0.00	C	1.08	5.70	Silty Clayey Loam	0.35
TN060	5.00	B	1.30	5.32	Silty Loam	0.39

**Table 4-134. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051302010502.** The definition of "Hydrologic Group" is provided in Appendix IV.

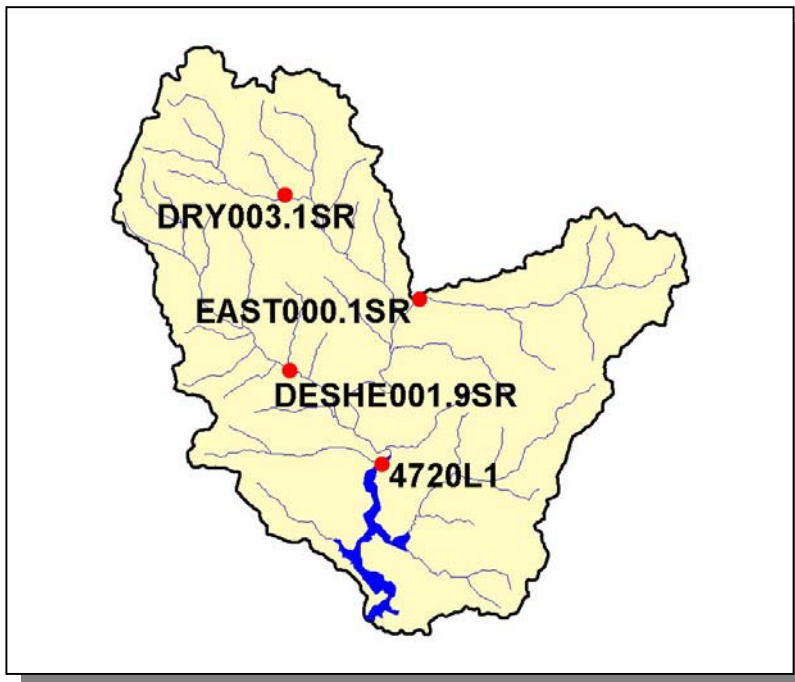
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Sumner	103,281	121,936	130,449	12.38	12,787	15,096	16,150	26.3
Trousdale	5,920	6,748	7,259	1.2	71	81	87	22.5
<b>Total</b>	<b>109,201</b>	<b>128,684</b>	<b>137,708</b>		<b>12,858</b>	<b>15,177</b>	<b>16,237</b>	<b>26.3</b>

*Table 4-135. Population Estimates in Subwatershed 051302010502.*

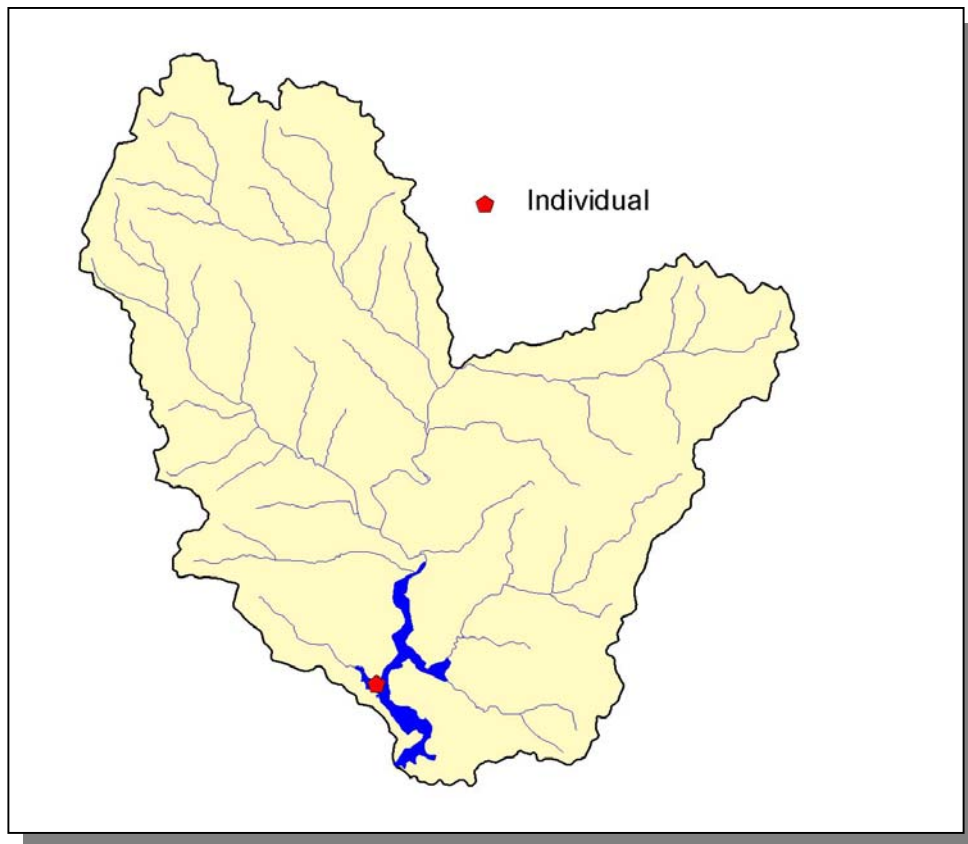
Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Gallatin	Sumner	21,495	4,346	4,305	26	15

*Table 4-136. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051302010502.*



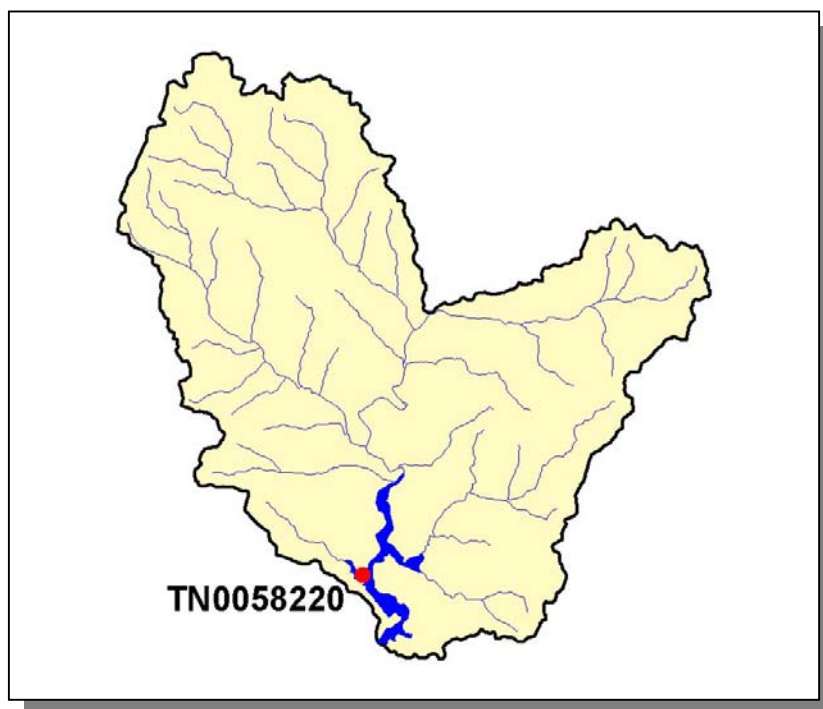
*Figure 4-173. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051302010502. More information, including site names and locations, is provided in Appendix IV.*

**4.2.E.ii.a. Point Source Contributions.**



**Figure 4-174. Location of Permits Issued in Subwatershed 051302010502.** More information, including the names of facilities, is provided in Appendix IV.





**Figure 4-175. Location of Active NPDES Sites in Subwatershed 051302010502.** More information, including the names of facilities, is provided in Appendix IV.

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**4.2.E.ii.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
3,524	7,114	237	8	390	31

**Table 4-137. Summary of Livestock Count Estimates in Subwatershed 051302010502.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Sumner	22,296	45,116	1,515	50	2,500	189
Trousdale	6,672	11,344	135	243	112	195

**Table 4-138. Summary of Livestock Count Estimates in Sumner and Trousdale Counties.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Sumner	88.2	88.2	2.0	6.3
Trousdale	30.0	30.0	0.1	0.4

**Table 4-139. Forest Acreage and Annual Removal Rates (1987-1994) in Sumner and Trousdale Counties.**

CROPS	TONS/ACRE/YEAR
Legumes (Pastureland)	0.43
Grass (Pastureland)	0.46
Grass (Hayland)	0.31
Legumes, Grass (Hayland)	0.23
Legumes (Hayland)	0.12
Grass, Forbs, Legumes (Mixed Pasture)	0.53
Corn (Row Crops)	12.32
Soybeans (Row Crops)	11.27
Tobacco (Row Crops)	6.47
Other Cropland not Planted	19.23
Conservation Reserve Program Lands	0.26
Farmsteads and Ranch Headquarters	0.34

**Table 4-140. Annual Estimated Total Soil Loss in Subwatershed 051302010502.**